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Date: 09/29/2000

Time: 09:29

Search Terms
PHIC
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	Total	USPAT	USOCR	EPO	JPO	Derwent
1	52615					
2	480417					
3	1403868					
4	183948					
5	32273					
6	1588120					
7	41978					
8	82					

	IBM TDB
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UserID: THavan

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Date: 09/29/2000

Time: 09:28

	U	1	Title	Current OR
1	☐	☐	Apparatus and method for monitoring intraocular and blood pressure by non-contact contour measurement	600/405
2	☐	☐	Interaction spheres of three-dimensional objects in three-dimensional workspace displays	345/355
3	☐	☐	Silver halide photographic emulsion	430/567
4	☐	☐	Interactive construction of 3D models from panoramic images	345/425
5	☐	☐	Endoscope form detecting apparatus in which coil is fixedly mounted by insulating member so that form is not deformed within endoscope	600/117
6	☐	☐	3D virtual reality multi-user interaction with superimposed positional information display for each user	345/435
7	☐	☐	System and method for radiological image formation	378/182
8	☐	☐	Non-Subjective Valuing.COPYRGT. the computer aided calculation, appraisal and valuation of anything and anybody	705/400
9	☐	☐	Rendering method and apparatus	345/425
10	☐	☐	Method and apparatus for simulating movement in multidimensional space with polygonal projections from subhemispherical imagery	345/419
11	☐	☐	Method and apparatus for synthetic viewpoint imaging	600/411

	Current XRef	Retrieval Classif	Inventor	S	C	P	2	3
1	600/398 ;		Dublin, Jr., Wilbur Leslie , et al.	☒	☐	☐	☐	☐
2	345/349		Berry, Richard Edmond , et al.	☒	☐	☐	☐	☐
3	430/604		Morimura, Kimiyasu	☒	☐	☐	☐	☐
4			Shum, Heung-Yeung , et al.	☒	☐	☐	☐	☐
5	600/424		Taniguchi, Akira , et al.	☒	☐	☐	☐	☐
6			Miyashita, Ken , et al.	☒	☐	☐	☐	☐
7	430/966		Verbeeck, Ann , et al.	☒	☐	☐	☐	☐
8	705/1		Vig, Tommy	☒	☐	☐	☐	☐
9	345/426 ; 345/430 ; 345/434		Aono, Masaki , et al.	☒	☐	☐	☐	☐
10			Golin, Stuart J. , et al.	☒	☐	☐	☐	☐
11	600/414 ; 600/424		Acker, David E.	☒	☐	☐	☐	☐

	U	1	Title	Current OR
12	☐	☐	Vallian/geometric hexagon opting symbolic Tesseract V/GHOST	345/419
13	☐	☐	Interactive authoring of 3D scenes and movies	345/419
14	☐	☐	System and method for increasing the performance for real-time rendering of three-dimensional polygonal data	345/419
15	☐	☐	Method for creating progressive simplicial complexes	345/441
16	☐	☐	System and method for increasing performance by efficient use of limited resources via incremental fetching, loading and unloading of data assets of three-dimensional worlds based on transient asset priorities	345/419
17	☐	☐	Multi-display apparatus	345/1
18	☐	☐	Automatic analysis in virtual endoscopy	345/420
19	☐	☐	Silver halide photographic emulsion	430/567
20	☐	☐	Visibility calculations for 3D computer graphics	345/421
21	☐	☐	Rendering an image using lookup tables giving illumination values for each light source by direction and distance	345/426
22	☐	☐	Method and system for high performance computer-generated virtual environments	345/419

	Current XRef	Retrieval Classif	Inventor	S	C	P	2	3
12	345/355 ; 345/357		Wahl, Larry E.	☒	☐	☐	☐	☐
13			Carey, Richard Joseph , et al.	☒	☐	☐	☐	☐
14			Kent, James R.	☒	☐	☐	☐	☐
15			Popovic, Jovan , et al.	☒	☐	☐	☐	☐
16	345/421		Woods, Daniel J. , et al.	☒	☐	☐	☐	☐
17	348/36 ; 434/44		Ohishi, Tetsu , et al.	☒	☐	☐	☐	☐
18	345/419		Vining, David J. , et al.	☒	☐	☐	☐	☐
19	430/569		Maruyama, Yoichi	☒	☐	☐	☐	☐
20	345/422		Lim, Hong Lip	☒	☐	☐	☐	☐
21	345/427		Penna, David E.	☒	☐	☐	☐	☐
22	345/430		McDowall, Ian E. , et al.	☒	☐	☐	☐	☐

	U	1	Title	Current OR
23	☐	☐	Silver halide photographic material and photographic element	430/213
24	☐	☐	Silver halide photographic light-sensitive material	430/551
25	☐	☐	Immersive video, including video hypermosaicing to generate from multiple video views of a scene a three-dimensional video mosaic from which diverse virtual video scene images are synthesized, including. panoramic, scene interactive and stereoscopic images	345/419
26	☐	☐	Endoscope form detecting apparatus in which coil is fixedly mounted by insulating member so that form is not deformed within endoscope	600/424
27	☐	☐	Three-dimensional graphic apparatus simplifying neighboring arrangement	345/433

	Current XRef	Retrieval Classif	Inventor	S	C	P	2	3
23	430/203 ; 430/206 ; 430/215 ; 430/217 ; 430/220 ; 430/227 ; 430/230 ; 430/231 ; 430/232 ; 430/404 ; 430/503 ; 430/523 ; 430/527 ; 430/539 ; 430/546 ; 430/608 ; 430/631 ; 430/950 ; 430/961		Aono, Toshiaki	☒	☐	☐	☐	☐
24	430/264 ; 430/448 ; 430/598 ; 430/607 ; 430/611 ; 430/613 ; 430/614 ; 430/615		Hirano, Katsumi	☒	☐	☐	☐	☐
25	348/13		Moezzi, Saied , et al.	☒	☐	☐	☐	☐
26			Taniguchi, Akira , et al.	☒	☐	☐	☐	☐
27	345/419 ; 700/96		Hirota, Katsuhiko , et al.	☒	☐	☐	☐	☐

	U	1	Title	Current OR
28	☐	☐	Apparatus for modeling three dimensional information	345/419
29	☐	☐	Portable measurement system using image and point measurement devices	356/376
30	☐	☐	Computer system with improved pixel processing capabilities	345/505
31	☐	☐	Photovoltaic device	136/258
32	☐	☐	Method and apparatus for converting a two dimensional motion picture into a three dimensional motion picture	345/473
33	☐	☐	Structured coil electromagnets for magnetic resonance imaging	335/296
34	☐	☐	Apparatus for modelling interaction of rigid bodies	703/6
35	☐	☐	Industrial robot with servo	318/568.22
36	☐	☐	Direct rendering of textured height fields	345/428
37	☐	☐	Processing composition and processing method for silver halide photographic materials	430/436
38	☐	☐	3D dynamic image production system with automatic viewpoint setting	345/419
39	☐	☐	Process for producing silver halide photographic material	430/539
40	☐	☐	Silver halide photographic material	430/584
41	☐	☐	Geometrically efficient self-inflating seat cushion	5/654

	Current XRef	Retrieval Classif	Inventor	S	C	P	2	3
28			Watanabe, Mutsumi , et al.	☒	☐	☐	☐	☐
29	345/419 ; 356/375 ; 382/285 ; 702/172		Corby, Jr., Nelson Raymond , et al.	☒	☐	☐	☐	☐
30	345/441 ; 345/501 ; 345/503 ; 345/522		Neave, John Walter , et al.	☒	☐	☐	☐	☐
31	136/249 ; 257/458		Fujioka, Yasushi , et al.	☒	☐	☐	☐	☐
32	345/419 ; 345/433 ; 352/50		Palm, Charles S.	☒	☐	☐	☐	☐
33	324/318 ; 335/216 ; 335/299		Pissanetzky, Sergio , et al.	☒	☐	☐	☐	☐
34			Goyal, Suresh , et al.	☒	☐	☐	☐	☐
35	318/568.18 ; 318/621 ; 901/9		Eismann, Paul H. , et al.	☒	☐	☐	☐	☐
36	345/419 ; 345/421 ; 345/427		Cosman, Michael A.	☒	☐	☐	☐	☐
37	430/440 ; 430/441 ; 430/446 ; 430/483 ; 430/490		Morishima, Shinnichi , et al.	☒	☐	☐	☐	☐
38	348/229		Fukui, Mika , et al.	☒	☐	☐	☐	☐
39	430/527 ; 430/532 ; 430/533 ; 430/537 ; 430/640 ; 430/642 ; 430/930		Miyamoto, Hajime , et al.	☒	☐	☐	☐	☐
40	430/573 ; 430/576		Kato, Takashi , et al.	☒	☐	☐	☐	☐
41	297/DIG.3 ; 36/43 ; 5/655.3		Johnson, Mark C.	☒	☐	☐	☐	☐

	U	1	Title	Current OR
42	☐	☐	High speed, amplitude variable thrust control method	60/204
43	☐	☐	Composition having a fixing ability for photography and method for processing photographic materials with the same	430/393
44	☐	☐	Apparatus for displaying multidimensional information	345/440
45	☐	☐	Direct display of CSG expression by use of depth buffers	345/422
46	☐	☐	Structured coil electromagnets for magnetic resonance imaging and method for fabricating the same	324/319
47	☐	☐	Segmented torus screen	353/94
48	☐	☐	Silver halide color photographic material	430/507
49	☐	☐	Evacuated two-phase head-transfer systems	165/272
50	☐	☐	Method for forming images	430/264
51	☐	☐	High speed, amplitude variable thrust control	60/233

	Current XRef	Retrieval Classif	Inventor	S	C	P	2	3
42	239/102.2 ; 251/129.2 ; 60/233 ; 60/258		Stone, William C.	☒	☐	☐	☐	☐
43	430/455 ; 430/459 ; 430/460		Kojima, Tetsuro , et al.	☒	☐	☐	☐	☐
44	345/419 ; 345/427 ; 700/28		Nonaka, Hisanori , et al.	☒	☐	☐	☐	☐
45	345/420 ; 345/426		Epstein, David A. , et al.	☒	☐	☐	☐	☐
46	29/602.1 ; 324/320 ; 335/296		Pissanetzky, Sergio	☒	☐	☐	☐	☐
47	359/451		Gersuk, Stephen H. , et al.	☒	☐	☐	☐	☐
48	430/512 ; 430/546 ; 430/551 ; 430/557 ; 430/931		Yoneyama, Hiroyuki	☒	☐	☐	☐	☐
49	123/41.21 ; 123/41.26 ; 126/588 ; 126/590 ; 165/104.14 ; 165/104.25 ; 165/104.27 ; 165/299 ; 165/300		Molivadas, Stephen	☒	☐	☐	☐	☐
50	430/219 ; 430/265 ; 430/487 ; 430/544 ; 430/598 ; 430/957		Okamura, Hisashi , et al.	☒	☐	☐	☐	☐
51	239/102.2 ; 251/129.2 ; 60/258		Stone, William C.	☒	☐	☐	☐	☐

	U	1	Title	Current OR
52	☐	☐	Method for making silver halide emulsion, photosensitive materials using the same, and methods of recording images using the photosensitive materials	430/568
53	☐	☐	Silver halide photographic material having magnetic recording member	430/496
54	☐	☐	Method for making silver halide emulsion, photosensitive materials using the same, and methods of recording images using the photosensitive materials	430/568
55	☐	☐	Industrial robot with servo	318/568.11
56	☐	☐	Silver halide photographic material	430/264
57	☐	☐	Panoramic display system	348/39
58	☐	☐	Multiple depth buffers for graphics and solid modelling	345/422
59	☐	☐	Motion controller for redundant or nonredundant linkages	700/263
60	☐	☐	Industrial robot with servo	414/729
61	☐	☐	Industrial robot with controller	700/262
62	☐	☐	Porous artificial vessel	623/1.39
63	☐	☐	Valve pistol for a high pressure cleaning device	239/526
64	☐	☐	Dancer roller	226/118.3

	U	1	Title	Current OR
65	☐	☐	Shaping geometric objects by cumulative translational sweeps	345/352
66	☐	☐	Elastomeric high torque, constant velocity joint	464/90
67	☐	☐	Tailoring tilt in an elastomeric high torque, constant velocity joint	384/221
68	☐	☐	Accommodating axial load in an elastomeric high torque, constant velocity joint	464/90
69	☐	☐	Memory system	365/230.04
70	☐	☐	System for interrelating sound transducers or sound sources and their environment	181/175
71	☐	☐	Image processing system	348/580
72	☐	☐	Lighting unit	315/46
73	☐	☐	Optical particle detector	356/338
74	☐	☐	Process and apparatus for the non-intrusive measurement of circulatory parameters	600/494
75	☐	☐	Intrauterine contraceptive device	128/833
76	☐	☐	Absorber element for pebble-bed reactors	376/226
77	☐	☐	Building structures	52/81.4
78	☐	☐	Switch mechanisms	335/207

	Current XRef	Retrieval Classif	Inventor	S	C	P	2	3
52	430/569 ; 430/570 ; 430/583 ; 430/584 ; 430/585 ; 430/593 ; 430/600 ; 430/613 ; 430/627 ; 430/642		Urabe, Shigeharu , et al.	☒	☐	☐	☐	☐
53	428/692 ; 428/694B ; 430/501		Sakakibara, Yoshio	☒	☐	☐	☐	☐
54	430/569 ; 430/570 ; 430/583 ; 430/584 ; 430/585 ; 430/593 ; 430/600 ; 430/613 ; 430/627 ; 430/642		Urabe, Shigeharu , et al.	☒	☐	☐	☐	☐
55	318/568.1 ; 318/568.13 ; 700/245 ; 901/15 ; 901/24 ; 901/28		Karlen, James P. , et al.	☒	☐	☐	☐	☐
56	430/544 ; 430/566 ; 430/598 ; 430/957		Okamura, Hisashi , et al.	☒	☐	☐	☐	☐
57	348/383		Ritchey, Kurtis J.	☒	☐	☐	☐	☐
58	345/501 ; 345/509		Rossignac, Jaroslaw R. , et al.	☒	☐	☐	☐	☐
59	318/568.19 ; 700/251 ; 901/15		Vold, Harvard I. , et al.	☒	☐	☐	☐	☐
60	74/479.01 ; 901/15 ; 901/24 ; 901/28		Karlen, James P. , et al.	☒	☐	☐	☐	☐
61	901/15		Vold, Havard I.	☒	☐	☐	☐	☐
62	606/153		Kira, Kazuaki	☒	☐	☐	☐	☐
63	239/583 ; 239/590		Suttner, Wolfgang	☒	☐	☐	☐	☐
64	226/190 ; 226/195 ; 242/615.12		Jones, Charles R.	☒	☐	☐	☐	☐

	Current XRef	Retrieval Classif	Inventor	S	C	P	2	3
65	345/420 ; 345/442 ; 703/1		Evans, Roger C. , et al.	☒	☐	☐	☐	☐
66	384/221 ; 416/134A ; 464/89 ; 74/572 ; 74/574		Byrnes, Francis E. , et al.	☒	☐	☐	☐	☐
67	384/124 ; 384/125 ; 384/620 ; 416/134A		Byrnes, Francis E. , et al.	☒	☐	☐	☐	☐
68	267/141.1 ; 403/228 ; 416/102 ; 416/134A ; 416/141 ; 416/148 ; 464/904		Ferris, Donald L.	☒	☐	☐	☐	☐
69			Hooks, Jr., John T.	☒	☐	☐	☐	☐
70	181/296		Prohs, John R.	☒	☐	☐	☐	☐
71	345/427 ; 348/121 ; 348/552 ; 382/113 ; 382/284 ; 396/322		Hooks, Jr., John T.	☒	☐	☐	☐	☐
72	315/177 ; 315/276 ; 315/92		Brown, Thomas A. , et al.	☒	☐	☐	☐	☐
73	250/574 ; 340/630		Snowman, Lawrence R.	☒	☐	☐	☐	☐
74			Grangirard, Henri , et al.	☒	☐	☐	☐	☐
75			Von Kesseru, Istvan , et al.	☒	☐	☐	☐	☐
76	376/327 ; 976/DIG.121		Lohnert, Gunter , et al.	☒	☐	☐	☐	☐
77	52/82 ; D25/13		Grosser, Christian E. , et al.	☒	☐	☐	☐	☐
78	200/521 ; 335/188		Rich, Donald S. , et al.	☒	☐	☐	☐	☐

	U	1	Title	Current OR
79	☐	☐	Magnetometer using superconducting rotating body	324/248
80	☐	☐	GRAPHIC INDICIA VIDEO SIGNAL ACQUISITION TRANSMISSION AND REPRODUCTION SYSTEM	358/410
81	☐	☐	OUTPUT KEYBOARD APPARATUS AND SIGNAL TRANSLATING METHODS THEREFOR	341/33
82	☐	☐	METHOD OF STIRRING MATERIALS AND APPARATUS THEREFOR	366/265 ;

	Current XRef	Retrieval Classif	Inventor	S	C	P	2	3
79	505/845		Fletcher, James C. Administrator of the National Aeronautics and Space , et al.	☒	☐	☐	☐	☐
80	358/485 ; 379/100.17		Campbell, John Scott , et al.	☒	☐	☐	☐	☐
81	178/17C ; 400/477		Silverberg, Morton	☒	☐	☐	☐	☐
82			Schoppe, Fritz	☒	☐	☐	☐	☐

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File 350:Derwent WPIX 19[redacted]2000/UD,UM &UP=200046
         (c) 2000 Derwent Info Ltd
File 347:JAPIO Oct 1976-2000/May(UPDATED 000915)
         (c) 2000 JPO & JAPIO
File 344:Chinese Patents ABS Apr 1985-2000/Aug
         (c) 2000 European Patent Office

Set     Items   Description
S1        159   P()(SURFACE? OR SPHERE? OR PLANE? ?) OR PSURFACE? OR PSPHE-
              RE?
S2      11482   VIEWPOINT? OR VIEW(1N)POINT? ? OR DIRECTION(1W)VIEW? ?
S3        838   (TEXTURE? OR TEXEL?)(5N)(MAP? ? OR MAPP? OR APPLICATION? OR
               APPLY?)
S4        118   (FULL?(2N)SURROUND? OR WRAP?()AROUND OR IMMERSION?)(5N)(SC-
              ENE? ? OR IMAGE? OR DATA OR PICTURE? ? OR GRAPHIC? ?)
S5          5   SAMPL?(5N)(VISIBLE OR VIRTUAL OR DIGITAL)(3N)(WORLD? OR EN-
              VIRON?)
S6          0   S1 AND S2 AND S3 AND (S4 OR S5)
S7    3344096   SURFACE? OR SPHERE? OR PLANE OR PLANES
S8          0   S7 AND S2 AND S3 AND (S4 OR S5)
S9          0   S2 AND S3 AND S4
S10         0   S3 AND S4
S11        24   (S1 OR S7) AND S2 AND (S3 OR S4)
S12      2267   ((FULL? OR COMPLETE? OR TOTAL? OR ENTIRE?)(2N)SURROUND? OR
              WRAP?()AROUND OR IMMERSION OR ENVELOP?)(10N)(SCENE? OR IMAGE?
              OR DATA OR PICTURE? OR GRAPHIC? ?)
S13         0   (S1 OR S7) AND S2 AND S3 AND S12
S14         0   S2 AND S3 AND S12
S15         0   S3 AND S12
S16         3   AU=OXAAL F?
S17         3   S16 NOT S11
S18         1   S2 AND S4
S19         5   S2 AND S12
S20         4   S19 NOT (S11 OR S17)
S21         1   S19 NOT S20
S22     17711   (FULL? ? OR COMPLETE? OR TOTAL? OR ENTIRE?)(2N)SURROUND? OR
               WRAP?()AROUND OR (IMMERS? OR ENVELOP?)(3N)(IMAGE? OR SCENE? -
              OR DATA OR PICTURE OR GRAPHIC? ? OR SPACE)
S23         0   S22 AND S2 AND S3
S24         0   S22 AND S3
?
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11/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012650211 **Image available**
WPI Acc No: 1999-456316/199938
XRPX Acc No: N99-341104

Game controller in interactive race car simulator system

Patent Assignee: MARIAH VISION3 ENTERTAINMENT LLC (MARI-N); ALCALA A (ALCA-I); AMBROSINO T J (AMBR-I); HILCHEY G (HILC-I); RINDGE T L (RIND-I); TAGGE J E (TAGG-I); TAGGE M J (TAGG-I)
Inventor: ALCALA A; AMBROSINO T J; HILCHEY G; RINDGE T L; TAGGE J E; TAGGE M J

Number of Countries: 003 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5919045	A	19990706	US 96751647	A	19961118	199938	B
WO 200041156	A1	20000713	WO 98US27861	A	19981231	200037	N

Priority Applications (No Type Date): US 96751647 A 19961118; WO 98US27861 A 19981231
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5919045	A		18	G09B-009/00	
WO 200041156	A1	E		G09B-009/04	

Designated States (National): CA JP

Abstract (Basic): US 5919045 A

NOVELTY - A game controller (12) in signal communication with an input unit (18), motion base control unit (22) and image generator (14), generates signals for controlling the image generator and motion base control unit according to the input signal received from the input unit.

DETAILED DESCRIPTION - Input signals generated by the input unit is received by the image generator. The image generator generates signals indicative of set of pre-recorded digital images which is indicative of a select number of initial set processed, pre-recorded digital images. An image presentation unit (26) picks up the set of images from the generator and presents it to the user.

A motion base (24) connected to the driver module moves the driver module along an axis in accordance to the base control signal generated by the motion base control unit. The image presentation unit projects the image on a mirror so as to generate the next set of images. The image generator generates the **texture map** from **point** -of-**view** position and projects them onto **surface** polygons of a visual element.

USE - For receiving input signals indicative of actions and for displaying images in an interactive vehicle simulator system.

ADVANTAGE - The motion to a driver is imparted by means of pneumatic motion base. The images displayed are close to the driver, but does not cause strain to the eyes. The images generated by the system are of realistic video-quality with a perceived depth.

DESCRIPTION OF DRAWING(S) - The figure shows a schematic view of a game controller in interactive race car simulator system.

Game controller (12)
Image generator (14)
Input unit (18)
Motion base control unit (22)
Motion base (24)
Image presentation unit (26)
pp; 18 DwgNo 1/13

Title Terms: GAME; CONTROL; INTERACT; RACE; CAR; SIMULATE; SYSTEM
Derwent Class: P85; T01; W04
International Patent Class (Main): G09B-009/00; G09B-009/04
International Patent Class (Additional): G09B-009/08
File Segment: EPI; EngPI

11/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012431622 **Image available**
WPI Acc No: 1999-237730/199920
XRPX Acc No: N99-177002
Three dimensional topography model display device for game machine, simulation apparatus, car navigation apparatus - displays image which is mapped to virtual transparent surface **and is observed from** viewpoint
Patent Assignee: NOMURA SOGO KENKYUSHO KK (NOMU-N)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 11066277	A	19990309	JP 97221783	A	19970818	199920	B

Priority Applications (No Type Date): JP 97221783 A 19970818
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 11066277	A		12	G06T-001/00	

Abstract (Basic): JP 11066277 A
NOVELTY - A virtual **surface** setting unit (3) establishes a transparent **surface** along the contour line of a 3D topography model which is input by an input unit (2). A photographed image is mapped to the transparent virtual **surface** of a **texture mapping** unit (4). An image observed from the position of a **viewpoint** is displayed on a display unit (6).
USE - For computer graphics display in game machine, simulation apparatus, car navigation apparatus.
ADVANTAGE - Displays realistic image. Reduces amount of data to be processed. DESCRIPTION OF DRAWING(S) - The drawing indicates a block diagram of a device. (2) Input unit; (3) Virtual **surface** setting unit; (4) **Texture mapping** unit; (6) Display unit.
Dwg.1/6
Title Terms: THREE; DIMENSION; TOPOGRAPHICAL; MODEL; DISPLAY; DEVICE; GAME; MACHINE; SIMULATE; APPARATUS; CAR; NAVIGATION; APPARATUS; DISPLAY; IMAGE; MAP; VIRTUAL; TRANSPARENT; **SURFACE** ; OBSERVE
Derwent Class: T01
International Patent Class (Main): G06T-001/00
International Patent Class (Additional): G06F-017/50; G06T-017/00
File Segment: EPI

11/5/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012264778 **Image available**
WPI Acc No: 1999-070884/199906
XRPX Acc No: N99-051788
Generating image of 3-dimensional object - includes determination of direction **of** view **giving least deviation of elements** surfaces **and determination of 2-dimensional image whereby image is formed having shape determined by stored parameters**
Patent Assignee: BRITISH TELECOM PLC (BRTE)
Inventor: MORTLOCK A N; SHEPPARD P J; WALLIN N J
Number of Countries: 082 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9858351	A1	19981223	WO 98GB1772	A	19980617	199906	B
AU 9881164	A	19990104	AU 9881164	A	19980617	199921	
GB 2341070	A	20000301	WO 98GB1772	A	19980617	200014	
			GB 9927913	A	19991125		
EP 990224	A1	20000405	EP 98930876	A	19980617	200021	
			WO 98GB1772	A	19980617		

Priority Applications (No Type Date): EP 97304217 A 19970617

Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
WO 9858351 A1 E 49 G06T-015/10
Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW
GB 2341070 A G06T-015/10 Based on patent WO 9858351
EP 990224 A1 E G06T-015/10 Based on patent WO 9858351
Designated States (Regional): DE ES FR GB
AU 9881164 A G06T-015/10 Based on patent WO 9858351

Abstract (Basic): WO 9858351 A
All data defining an object, I.e. a head, are recorded in a store (1) and a processor device (2) has access to the store and also to a second store (3) containing programmes for operating the processor device during the conventional steps. A second processor device (4) with its own programme store (5) provides digitally coded images as a video signal at an output (6), during, directly or after storage and/or transmission, for a visual display device. The processors have conventional input-output arrangements, typically keyboards (7,8), mice (9,10) and visual displays (11,12).
The first processor device has a general purpose memory (13), while a mass storage (14) such as a disc drive is provided and the second processor is provided with a memory and storages (15,16). For each **surface** element of an image, a measure is determined being representative of deviation of the **surface** of the element from the normal to the **direction** of **view** , the direction of viewing exhibiting least deviation is determined and an image is formed having a shape determined by the stored parameters and having **surface** detail determined by the 2-dimensional image.
USE - Generation of image of 3-dimensional object by **application** of **texture** to 3-dimensional image of object
ADVANTAGE - Reduction of time to texture model
Dwg.1/13
Title Terms: GENERATE; IMAGE; DIMENSION; OBJECT; DETERMINE; DIRECTION; VIEW ; DEVIATE; ELEMENT; **SURFACE** ; DETERMINE; DIMENSION; IMAGE; IMAGE; FORMING; SHAPE; DETERMINE; STORAGE; PARAMETER
Derwent Class: T01
International Patent Class (Main): G06T-015/10
File Segment: EPI

11/5/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012006919 **Image available**
WPI Acc No: 1998-423829/199836
XRPX Acc No: N98-331126
Three dimensional game apparatus - projects each vertex of virtual rectangular polygons arranged on virtual screen along texture plane **with virtual point as its projection centre**
Patent Assignee: NAMCO LTD (NAMC-N)
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No Kind Date Applicat No Kind Date Week
JP 10177662 A 19980630 JP 97290465 A 19971007 199836 B

Priority Applications (No Type Date): JP 96297107 A 19961017
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
JP 10177662 A 14 G06T-017/00

Abstract (Basic): JP 10177662 A
The apparatus has a co-ordinate calculation unit which calculates

and obtains texture co-ordinate of each vertex of multiple rectangular polygons which are arranged on a screen. The **mapping** of the **texture** designated by the texture co-ordinate to the rectangular polygon is performed. A synthesising unit synthesis image arranged in rectangular polygon within the field of view.

The virtual **view point** (30) defining a predetermined position relationship with the texture **plane** (34) is specified along predetermined direction and is set up on a virtual screen (32). Each vertex of the virtual rectangular polygons (36-0-36-239) arranged on the virtual screen is projected along the texture **plane** with virtual point as its projection centre. The texture co-ordinate of the projecting point is established as the texture co-ordinate of each vertex of the rectangular polygon.

ADVANTAGE - Synthesises quality background images with reduced number of polygon shapes.

Dwg.3/17

Title Terms: THREE; DIMENSION; GAME; APPARATUS; PROJECT; VERTEX; VIRTUAL; RECTANGLE; POLYGONAL; ARRANGE; VIRTUAL; SCREEN; TEXTURE; **PLANE** ; VIRTUAL ; POINT; PROJECT; CENTRE
Derwent Class: P36; T01; W02; W04
International Patent Class (Main): G06T-017/00
International Patent Class (Additional): A63F-009/22; G06T-015/00
File Segment: EPI; EngPI

11/5/5 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX

011895812 **Image available**
WPI Acc No: 1998-312722/199827
XRPX Acc No: N98-245072
Computer graphics image generating method - in which more than one texture is mapped to same surface, and co-ordinate maps of textures are shifted relative to each other when viewpoint changes
Patent Assignee: KONINK PHILIPS ELECTRONICS NV (PHIG); PHILIPS ELECTRONICS NV (PHIG); PHILIPS NORDEN AB (PHIG); US PHILIPS CORP (PHIG)
Inventor: VAN OVERVELD C W A M
Number of Countries: 019 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9822911	A1	19980528	WO 97IB1307	A	19971020	199827	B
EP 877991	A1	19981118	EP 97943112	A	19971020	199850	
			WO 97IB1307	A	19971020		
US 6049337	A	20000411	US 97972977	A	19971119	200025	
JP 2000504453	W	20000411	WO 97IB1307	A	19971020	200029	
			JP 98523384	A	19971020		

Priority Applications (No Type Date): EP 96203265 A 19961121
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9822911	A1	E	12	G06T-015/10	
Designated States (National): JP					
Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
JP 2000504453	W		17	G06T-015/00	Based on patent WO 9822911
EP 877991	A1	E		G06T-015/10	Based on patent WO 9822911
Designated States (Regional): DE FR GB					
US 6049337	A			G06T-011/40	

Abstract (Basic): WO 9822911 A

The image generation method involves selecting a **viewpoint** relative to a **surface** , and determining an area in the image in which the **surface** is visible as viewed from the **viewpoint** . A **texture** on the area is **texture mapped** according to a co-ordinate map.

At least a further **texture** is **texture mapped** on the area according to a further co-ordinate map. A relative offset between the

co-ordinate map and further co-ordinate map is adjusted depending upon the **viewpoint** . A combination of the **mapped texture** and the further **mapped texture** in the area is rendered.

USE - Generating two-dimensional image of **surface** in higher dimensional model space in computer graphics applications.

ADVANTAGE - Enables mapping of modelled **surface** from three or higher dimensional space on area of pixels in two dimensional image, and **texture mapping** pixels on area.

Dwg.3/5

Title Terms: COMPUTER; GRAPHIC; IMAGE; GENERATE; METHOD; MORE; ONE; TEXTURE ; MAP; **SURFACE** ; CO; ORDINATE; MAP; TEXTURE; SHIFT; RELATIVE; CHANGE
Derwent Class: T01
International Patent Class (Main): G06T-011/40; G06T-015/00; G06T-015/10
International Patent Class (Additional): G06T-011/00
File Segment: EPI

11/5/6 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX

011885575 **Image available**
WPI Acc No: 1998-302485/199827
XRPX Acc No: N98-237061

Mirror- surface **rendering method for computer graphics - involves performing** texture mapping **of image to** surface **of object with mirror** surface **and displaying result of** texture mapping

Patent Assignee: IBM CORP (IBMC); INT BUSINESS MACHINES CORP (IBMC)
Inventor: AONO M; OHBUCHI R; SHIMIZU K
Number of Countries: 002 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 10105734	A	19980424	JP 96230005	A	19960830	199827	B
US 6034691	A	20000307	US 97902270	A	19970729	200019	

Priority Applications (No Type Date): JP 96230005 A 19960830
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 10105734	A		16	G06T-015/00	
US 6034691	A			G06T-015/10	

Abstract (Basic): JP 10105734 A

The method involves rendering a three-dimensional space containing an object with a mirror **surface** . The **surface** of the object is divided into several polygonal components, e.g. triangles. A polyhedron, e.g. cube, with a predetermined point inside the three-dimensional space, is generated. A rendering process is performed from a predetermined point as a **viewpoint** to each **surface** of the polyhedron. The generated image is stored. The vector in each vertex of the polygonal component from the **viewpoint** is obtained.

The **surface** where the intersection of the vector and the polyhedron exists, when the predetermined point is made the starting point, is obtained. The **surface** where the intersection exists and the vector are used. The coordinate in the image corresponding to each vertex of the polygonal component is obtained and used. The **texture mapping** of the image to the **surface** of the object with the mirror **surface** is performed. The result of the **texture mapping** is displayed.

ADVANTAGE - Offers mapping function covering all cubic directions of space and in which real-time control is possible. Enables high-speed packed reflect phenomenon.

Dwg.1/12

Title Terms: MIRROR; **SURFACE** ; RENDER; METHOD; COMPUTER; GRAPHIC; PERFORMANCE; TEXTURE; MAP; IMAGE; **SURFACE** ; OBJECT; MIRROR; **SURFACE** ; DISPLAY; RESULT; TEXTURE; MAP
Derwent Class: T01
International Patent Class (Main): G06T-015/00; G06T-015/10
File Segment: EPI

11/5/7 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX

011634647 **Image available**
WPI Acc No: 1998-051775/199805
XRPX Acc No: N98-041161
Computer graphic system for producing dynamic image of continuous texture surface e.g terrain beneath aircraft - has active map memory that stores actively-stored portions of levels of texture as truncated pyramid and image system applies texture from levels of texture data in accordance with ranges defined by annular rings
Patent Assignee: EVANS & SUTHERLAND COMPUTER CO (EVAN-N)
Inventor: ERDAHL A C; ROBINSON J A
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5699497	A	19971216	US 94197957	A	19940217	199805	B
			US 96613893	A	19960311		

Priority Applications (No Type Date): US 94197957 A 19940217; US 96613893 A 19960311
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5699497	A		1	G06T-015/00	Cont of application US 94197957

Abstract (Basic): US 5699497 A
The system includes a terrain storage for storing the terrain field representation data. A texture storage stores at least a first level and a second level of texture data. The first level provides a greater texture resolution of the terrain. The second level provides a lesser texture resolution of the terrain. An active map memory system is coupled to the texture storage to store a first portion of the first level and a second portion of the second level.
The first portion spans a smaller **surface** area about the common centre and the second portion spans a larger **surface** area about the common centre. A paging structure is coupled to the active map memory system for selectively paging fresh texture data from the **texture** storage to the active **map** memory system in accordance with moving **viewpoint** . An image system processes the terrain representation data from the terrain storage and the selectively stored portions of **texture** data from the active **map** memory system to provide image data signals. A display device provides the dynamic image in accordance with the image data signals.
ADVANTAGE - Organises and selectively pages portion of extremely large continuous terrain map with reasonably sized active memory while assuring that map data is available as needed.
Dwg.1
Title Terms: COMPUTER; GRAPHIC; SYSTEM; PRODUCE; DYNAMIC; IMAGE; CONTINUOUS ; TEXTURE; **SURFACE** ; TERRAIN; BENEATH; AIRCRAFT; ACTIVE; MAP; MEMORY; STORAGE; ACTIVE; STORAGE; PORTION; LEVEL; TEXTURE; TRUNCATE; PYRAMID; IMAGE; SYSTEM; APPLY; TEXTURE; LEVEL; TEXTURE; DATA; ACCORD; RANGE; DEFINE; ANNULAR; RING
Derwent Class: T01
International Patent Class (Main): G06T-015/00
File Segment: EPI

11/5/8 (Item 8 from file: 350)
DIALOG(R)File 350:Derwent WPIX

011143375 **Image available**
WPI Acc No: 1997-121299/199712
XRPX Acc No: N97-099835
Mapping and blending unit for volume rendering system - has volume data

in voxel memory and parameters provided to slice volume in view direction for slice mapping and blending

Patent Assignee: MITSUBISHI DENKI KK (MITQ); MITSUBISHI ELECTRIC CORP (MITQ)
Inventor: KAMEYAMA M; NEGISHI H
Number of Countries: 005 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 758118	A2	19970212	EP 96110667	A	19960702	199712	B
JP 9050537	A	19970218	JP 95203191	A	19950809	199717	
US 5831623	A	19981103	US 96671685	A	19960628	199851	

Priority Applications (No Type Date): JP 95203191 A 19950809
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 758118	A2	E	41	G06T-017/00	
Designated States (Regional): DE FR GB					
JP 9050537	A		17	G06T-015/00	
US 5831623	A			G06T-011/40	

Abstract (Basic): EP 758118 A

The volume rendering apparatus includes a microprocessor (10) which stores **points** of **view** coordinates, sampling intervals and vertices of the volume object and a mapping object. A voxel memory (11) stores coordinate and colour data for the three dimensional image. A parameter provider (12) receives coordinates of the **point** of **view** and object vertices.

The volume object is sliced into a number of volume **planes** orthogonal to the **direction** of **view** and a number of **mapping planes** . These are **texture mapped** and blended with three dimensional data for display.

ADVANTAGE - Provides an accurate volume image by using accurate volume data of pixels rather than by interpolation.

Dwg.1/29

Title Terms: MAP; BLEND; UNIT; VOLUME; RENDER; SYSTEM; VOLUME; DATA; VOXEL; MEMORY; PARAMETER; SLICE; VOLUME; VIEW; DIRECTION; SLICE; MAP; BLEND
Derwent Class: T01
International Patent Class (Main): G06T-011/40; G06T-015/00; G06T-017/00
File Segment: EPI

11/5/9 (Item 9 from file: 350)

011114064 **Image available**
WPI Acc No: 1997-091989/199709
XRPX Acc No: N97-075893

Visualisation display for satellite environmental observation data - by providing viewpoint **of whole earth region model, based on geometrical data of specific line direction and line, perpendicular to specific direction**

Patent Assignee: HITACHI LTD (HITA)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 8329277	A	19961213	JP 95137637	A	19950605	199709	B

Priority Applications (No Type Date): JP 95137637 A 19950605
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 8329277	A		17	G06T-017/00	

Abstract (Basic): JP 8329277 A

The satellite viewing method involves computing the **viewpoint** position as an observation direction. A display model is projected on a display **surface** from the computed **viewpoint** position. **Texture mapping** is processed from the data observed by the projected display

model on the display **surface** .

An observation direction **viewpoint** of an earth model and the displaying model of the earth whole region is provided, based on the geometrical data of the mesh data of a specific line direction and the line that intersects perpendicularly in the specific direction.

ADVANTAGE - Provides high-speed visualisation display and reduces user operating load. Observes time sequential variation of earth observation data easily. Eliminates coordinate transformation processing in **viewpoint** movement.

Dwg.1/17

Title Terms: VISUAL; DISPLAY; SATELLITE; ENVIRONMENT; OBSERVE; DATA; WHOLE; EARTH; REGION; MODEL; BASED; GEOMETRY; DATA; SPECIFIC; LINE; DIRECTION; LINE; PERPENDICULAR; SPECIFIC; DIRECTION

Derwent Class: T01

International Patent Class (Main): G06T-017/00

File Segment: EPI

11/5/10 (Item 10 from file: 350)

DIALOG(R)File 350:Derwent WPIX

011013083 **Image available**

WPI Acc No: 1996-510033/199651

Related WPI Acc No: 1996-197426

XRPX Acc No: N96-429903

Measurement appts. monitoring using two-dimensional distribution measurement image data - by aligning viewpoint **and angle of distribution measurement projection image to space geometric model of plant appts. in direction of measurement appts. position**

Patent Assignee: TOSHIBA KK (TOKE)

Inventor: ARAKAWA A; HANEDA R; HATTORI Y; KANEMOTO S; TAI I; TSURUMAKI H

Number of Countries: 002 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 8263133	A	19961011	JP 9569432	A	19950328	199651	B
US 5822450	A	19981013	US 95519894	A	19950828	199848	

Priority Applications (No Type Date): JP 9569432 A 19950328; JP 94206945 A 19940831

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 8263133	A		28	G05B-023/02	
US 5822450	A			G06K-009/00	

Abstract (Basic): JP 8263133 A

The method involves aligning a distribution measurement image data to a corresp. projection figure of a plant appts. space geometric model. The position and direction of a distribution measuring device (1) is determined through a distribution measurement image data alignment unit (2). A **texture mapping** of the distribution measurement image data is performed on the **surface** of the space geometric model of the plant appts. based on the measurement machine position and the direction determined by the distribution measurement image data alignment unit.

The projected figure of the plant appts. space geometric model in which the **texture mapping** is performed, is patterned. The projected image is displayed.

ADVANTAGE - Facilitates monitoring of appts. condition using distribution measurement image data by displaying projected image of space geometric model. Enables simple alignment of distribution measurement image and space geometric-model data of plant appts.

Dwg.1/29

Title Terms: MEASURE; APPARATUS; MONITOR; TWO; DIMENSION; DISTRIBUTE; MEASURE; IMAGE; DATA; ALIGN; ANGLE; DISTRIBUTE; MEASURE; PROJECT; IMAGE; SPACE; GEOMETRY; MODEL; PLANT; APPARATUS; DIRECTION; MEASURE; APPARATUS; POSITION

Derwent Class: S02; S03; T06

International Patent Cla[redacted](Main): G05B-023/02; G06K-009/[redacted]
International Patent Class (Additional): G01H-009/00; G01J-005/10
File Segment: EPI

11/5/11 (Item 11 from file: 350)
DIALOG(R)File 350:Derwent WPIX

010135479 **Image available**
WPI Acc No: 1995-036730/199505
XRPX Acc No: N95-028895

Game playing appts using image synthesiser - texture information attached to polygons of shapes is stored on texture information store as image information of different resolution

Patent Assignee: NAMCO LTD (NAMC-N)
Inventor: SASAKI K

Number of Countries: 003 Number of Patents: 007
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9429813	A1	19941222	WO 94JP943	A	19940610	199505 B
GB 2284526	A	19950607	WO 94JP943	A	19940610	199526
			GB 952639	A	19950210	
JP 7501579	X	19950706	WO 94JP943	A	19940610	199535
			JP 95501579	A	19940610	
US 5577960	A	19961126	WO 94JP943	A	19940610	199702
			US 95379679	A	19950626	
GB 2284526	B	19971210	WO 94JP943	A	19940610	199801
			GB 952639	A	19950210	
JP 2000057371	A	20000225	JP 95501579	A	19940610	200021
			JP 99227837	A	19940610	
JP 2000067263	A	20000303	JP 95501579	A	19940610	200023
			JP 99227838	A	19940610	

Priority Applications (No Type Date): JP 93166495 A 19930610
Cited Patents: 01Jnl.Ref; EP 311081; JP 1205277; JP 3268186; JP 4238587; US 4994989
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9429813	A1	J	41	G06F-015/72	
Designated States (National): GB JP US					
JP 2000057371	A		14	G06T-015/00	Div ex application JP 95501579
JP 2000067263	A		14	G06T-015/00	Div ex application JP 95501579
GB 2284526	A		41	G06T-017/40	Based on patent WO 9429813
JP 7501579	X		1	G06F-015/72	Based on patent WO 9429813
US 5577960	A		20	A63F-009/24	Based on patent WO 9429813
GB 2284526	B			G06T-017/40	Based on patent WO 9429813

Abstract (Basic): WO 9429813 A

The information about a three-dimensional object is stored in an object data storage (26) as object information for displaying the object using a plurality of shape models of different accuracies. The object information accuracy of shape models is higher as the distance between the **viewpoint** of a **viewpoint** coordinate system and the three-dimensional object is shorter.

The texture information storage (32) as image information having different resolutions according to the shape models and the polygons constituting the shape models. An image forming part (34) synthesizes an image to be displayed by **mapping** the **texture** information of accuracies corresponding to the polygons of a three-dimensional object on the polygons of the object generated by a three-dimensional arithmetic part (22) by transformation of perspective projection, and displays it on the display (40).

USE/ADVANTAGE - As image synthesiser. Provision for of displaying image of three-dimensional object with small number of polygons in real time with high resolution.

Dwg.4a/12

Title Terms: GAME; PLAY; APPARATUS; IMAGE; SYNTHESISER; TEXTURE;

INFORMATION; ATTACH; POLYGONAL; SHAPE; STORAGE; TEXTURE; INFORMATION; STORAGE; IMAGE; INFORMATION; RESOLUTION
Derwent Class: P36; T01; W04
International Patent Class (Main): A63F-009/24; G06F-015/72; G06T-015/00; G06T-017/40
International Patent Class (Additional): A63F-013/00; G06T-011/00; G06T-017/00
File Segment: EPI; EngPI

11/5/12 (Item 12 from file: 350)
DIALOG(R)File 350:Derwent WPIX

009675580 **Image available**
WPI Acc No: 1993-369133/199346
XRPX Acc No: N93-284918
Integral virtual reality, image recording and projection audiovisual appts. - has alternating images for left and right eye projected onto screen with sensors to allow image **search to obtain** immersion **effect**
Patent Assignee: DOLZ GARCIA R (GARC-I); GADEA PEREZ J P (PERE-I); JP PRODUCCIONES SL (JPPR-N); PROCTER & GAMBLE CO (PROC); GARCIA R D (GARC-I); PEREZ J P G (PERE-I)
Inventor: DOLZ GARCIA R; GADEA PEREZ J P; GADEA PEREZ J; GARCIA R D; PEREZ J P
Number of Countries: 026 Number of Patents: 011
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9322879	A2	19931111	WO 93ES34	A	19930427	199346 B
ES 2043549	A2	19931216	ES 92907	A	19920430	199403
NO 9304815	A	19940204	WO 93ES34	A	19930430	199414
			NO 934815	A	19931227	
EP 592652	A1	19940420	EP 93911514	A	19930427	199416
			WO 93ES34	A	19930427	
FI 9305949	A	19940228	WO 93ES34	A	19930427	199418
			FI 935949	A	19931230	
TW 224163	A	19940521	TW 92105101	A	19920629	199425
JP 7500231	W	19950105	JP 93518948	A	19930427	199511
			WO 93ES34	A	19930427	
WO 9322879	A3	19931223	WO 93ES34	A	19930427	199514
ES 2043549	B1	19961001	ES 92907	A	19920430	199645
EP 592652	B1	19970917	EP 93911514	A	19930427	199742
			WO 93ES34	A	19930427	
DE 69313967	E	19971023	DE 613967	A	19930427	199748
			EP 93911514	A	19930427	
			WO 93ES34	A	19930427	

Priority Applications (No Type Date): ES 92907 A 19920430
Cited Patents: No-SR.Pub; 2.Jnl.Ref; EP 479605; GB 2187912; JP 3048233; JP 62289083; US 4310849
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9322879	A2		44	H04N-013/00	
Designated States (National): CA FI JP KP KR NO RU US					
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
EP 592652	A1	E		H04N-013/00	Based on patent WO 9322879
Designated States (Regional): AT BE CH DE DK FR GB GR IE IT LI LU MC NL PT SE					
JP 7500231	W		1	H04N-013/00	Based on patent WO 9322879
EP 592652	B1	E	22	H04N-013/00	Based on patent WO 9322879
Designated States (Regional): AT BE CH DE DK FR GB GR IE IT LI LU MC NL PT SE					
DE 69313967	E			H04N-013/00	Based on patent EP 592652 Based on patent WO 9322879
ES 2043549	A2			G02B-027/22	
NO 9304815	A			H04N-000/00	
FI 9305949	A			H04N-000/00	

TW 224163	A	G[redacted]-003/00
WO 9322879	A3	H04N-013/00
ES 2043549	B1	H04N-013/00

Abstract (Basic): WO 9322879 A

The system projects an image onto a screen (16) of a headset, after recording the image in a range of 100 deg. vertically, 180 deg. horizontally and up to 360 deg. vertically and horizontally, in such a way as to allow **immersion** into the **image** and sound. These are decoded according to the position of a spectator w.r.t. the scene.

The audiovisual appts. has a reception system, data processor, a screen, optical system (19), light obscurers (17, 18), sound system and a headset. Each spectator is individually connected to the appts.. Images are seen on a screen through the optical system and light obscurers for the left eye (22) and right eye (21). Images are transmitted through a selector (20) to each eye and the images receives are combined in the spectators, field of view to give the appearance of three dimensions.

USE - Projection of films of images and viewing or recording of virtual reality.

Dwg.11/13

Title Terms: INTEGRAL; VIRTUAL; IMAGE; RECORD; PROJECT; AUDIOVISUAL; APPARATUS; ALTERNATE; IMAGE; LEFT; RIGHT; EYE; PROJECT; SCREEN; SENSE; ALLOW; IMAGE; SEARCH; OBTAIN; IMMERSE; EFFECT

Derwent Class: P81; W04

International Patent Class (Main): G02B-027/22; G02F-003/00; H04N-000/00; H04N-013/00

International Patent Class (Additional): G06F-015/62; G06F-015/66

File Segment: EPI; EngPI

11/5/13 (Item 1 from file: 347)

DIALOG(R)File 347:JAPIO

06481686 **Image available**

IMAGE SYNTHESIZER AND GAME DEVICE USING THE SAME

PUB. NO.:	20-00067263 [JP 2000067263 A]
PUBLISHED:	March 03, 2000 (20000303)
INVENTOR(s):	SASAKI TAKEHITO
APPLICANT(s):	NAMCO LTD
APPL. NO.:	11-227838 [JP 94227838]
FILED:	June 10, 1994 (19940610)
PRIORITY:	05166495 [JP 94166495], JP (Japan), June 10, 1994 (19940610)
INTL CLASS:	G06T-015/00; A63F-013/00; G06T-017/00; G06T-011/00

ABSTRACT

PROBLEM TO BE SOLVED: To provide an image synthesizer for displaying a three-dimensional(3D) object with a few polygons and high resolution.

SOLUTION: This image synthesizer is provided with an object information storage means 24 for storing the information of a 3D object as object information expressed with the plural form modals of different accuracy, means 22 and 24 for reading the object information, which is expressed with the form model of high accuracy according to the reduction of a distance between a **viewpoint** and the 3D object, out of the object information storage means 24, arranging this information in a virtual 3D space and projecting/transforming this 3D object to the projection **plane** of a **viewpoint** coordinate system, a texture information storage means 32 formed so as to store the texture information of respective polygons composing each form model corresponding to the form models of different accuracy of the 3D object, and an image forming means 34 for forming a display image by reading the texture information of the form model of correspondent accuracy out of the **texture** information storage means and **mapping** it to the polygons of the projected and transformed 3D object.

11/5/14 (Item 2 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2000 JPO & JAPIO. All rts. reserv.

06444510 **Image available**
VIRTUAL REALITY SYSTEM

PUB. NO.: 20-00030080 [JP 2000030080 A]
PUBLISHED: January 28, 2000 (20000128)
INVENTOR(s): SAWAI TAKESHI
APPLICANT(s): BASU PLUS ONE KK
APPL. NO.: 10-198767 [JP 98198767]
FILED: July 14, 1998 (19980714)
INTL CLASS: G06T-015/00

ABSTRACT

PROBLEM TO BE SOLVED: To provide a virtual reality system where an image processing is drastically simplified by improving a method for displaying images in a desired virtual space.

SOLUTION: The desired virtual space 10 is created based on computer graphics, a **viewpoint** position is determined in the virtual space, a hexahedron with the **viewpoint** position 11 as center is assumed. Images in the directions of respective **surfaces** of the hexahedron are rendered as materials for **texture mapping** , the rendered images of a regular hexahedron are displayed on the respective **surface** of the virtual regular hexahedron by performing the **texture mapping** to these **surfaces** . Moreover, change or movement of the **viewpoint** position is enabled and the displayed images are still images or moving images which are photographed by a camera or a video camera.

11/5/15 (Item 3 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2000 JPO & JAPIO. All rts. reserv.

06364781 **Image available**
IMAGE PROCESSOR, GAME DEVICE, IMAGE PROCESSING METHOD AND RECORDING MEDIUM

PUB. NO.: 11-306391 [JP 11306391 A]
PUBLISHED: November 05, 1999 (19991105)
INVENTOR(s): HAGA NORIO
FUKUHARA TOMOSATO
SATO KAZUNOBU
APPLICANT(s): SEGA ENTERP LTD
APPL. NO.: 10-107423 [JP 98107423]
FILED: April 17, 1998 (19980417)
INTL CLASS: G06T-017/00; A63F-009/22; A63F-009/24; G06T-015/00

ABSTRACT

PROBLEM TO BE SOLVED: To surely display a locus band even though the position of a **view point** is set to any position by setting a specific line on an object and **mapping** and displaying prescribed **texture** to a locus band that is made by a line as the object moves in virtual space.

SOLUTION: When it is decided that a locus band is shown on a ball, an object specifying means 202 specifies an object on which the ball is shown by referring to a shape data area 213 and calculates a specified point that is a start point of the locus band. An endpoint calculating means 203 calculates endpoints of a segment line that passes the specified point based on a specified point of the ball, the preceding positional data of the ball which is stored an locus data area 215 and positional data of a **view point** stored in a **view point** positional data area 216. A **mapping** means 204 **maps texture** data which is allocated for the locus

band on a **plane** made [redacted] connecting the endpoints when [redacted] endpoints are calculated by the means 203.

11/5/16 (Item 4 from file: 347)
DIALOG(R)File 347:JAPIO

06154823 **Image available**
METHOD AND DEVICE FOR SYNTHESIZING FACIAL IMAGE OF PERSON WEARING HEAD MOUNT DISPLAY

PUB. NO.: 11-096366 [JP 11096366 A]
PUBLISHED: April 09, 1999 (19990409)
INVENTOR(s): SHIWA SHINICHI
KOBAYASHI MINORU
KITAGAWA AIKO
ICHIKAWA TADATSUGU
APPLICANT(s): NIPPON TELEGR & TELEPH CORP <NTT>
APPL. NO.: 09-254664 [JP 97254664]
FILED: September 19, 1997 (19970919)
INTL CLASS: G06T-007/00; G06T-001/00

ABSTRACT
PROBLEM TO BE SOLVED: To provide facial image synthesizing method and device which obtains the facial image of a user who does not have a head mount display when the head mount display is used as a displaying means in an image communication system, etc.
SOLUTION: The front image (moving image) of a user is photographed over a head mount display at the position of a camera 3 that is attached to the head mount display. A facial area that is not covered with the head mount display about the moving image is used as it is, and an image processing means 6 performs processing that replaces a covered area with an area which is segmented with a mask pattern of the head mount display from a still image that is preliminarily photographed at the same **view point** and is accumulated in an accumulating means 5 when the head mount display is not worn. A facial image that is synthesized from the moving image and the still image is pasted on the **surface** of an appropriate solid body such as a cube with a **texture mapping** algorithm and it is outputted or displayed as the head of a person.

11/5/17 (Item 5 from file: 347)
DIALOG(R)File 347:JAPIO

06124740 **Image available**
SIMPLE DISPLAY DEVICE FOR THREE-DIMENSIONAL TOPOGRAPHIC MODEL HAVING LARGE NUMBER OF BODIES ARRANGED **SURFACE** AND ITS SIMPLE DISPLAY METHOD

PUB. NO.: 11-066277 [JP 11066277 A]
PUBLISHED: March 09, 1999 (19990309)
INVENTOR(s): HAMABE TORU
NAKAMURA HIROYUKI
APPLICANT(s): NRI & NCC CO LTD
APPL. NO.: 09-221783 [JP 97221783]
FILED: August 18, 1997 (19970818)
INTL CLASS: G06T-001/00; G06T-017/00; G06F-017/50

ABSTRACT
PROBLEM TO BE SOLVED: To provide a simple display device and its simple display method, which can display a three-dimensional topographic model having a large number of bodies, arranged on its **surface** graphically and stereoscopically with a small amount of data and a small load of

information processing.

SOLUTION: This device is equipped with an input means 2 which inputs three-dimensional topographic features as a three-dimensional model, a virtual **plane** setting means 3 which sets vertical virtual **surfaces** and horizontal virtual **surfaces** along contours of the three-dimensional topographic model, a **texture** **mapping** means 4 which **maps** the photographic image of the flank of a plant to the vertical virtual **surfaces** and a photographic image of the plant taken from above to the horizontal virtual **surfaces** , and a display means 6 which displays an image viewed from the position of a movable **viewpoint** .

11/5/18 (Item 6 from file: 347)

05894562 **Image available**
THREE-DIMENSIONAL GAME DEVICE AND INFORMATION STORING MEDIUM

PUB. NO.: 10-177662 [JP 10177662 A]
PUBLISHED: June 30, 1998 (19980630)
INVENTOR(s): MATSUDA SHIZUKA
APPLICANT(s): NAMCO LTD [472204] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 09-290465 [JP 97290465]
FILED: October 07, 1997 (19971007)
INTL CLASS: [6] G06T-017/00; A63F-009/22; G06T-015/00
JAPIO CLASS: 45.9 (INFORMATION PROCESSING -- Other); 30.2 (MISCELLANEOUS GOODS -- Sports & Recreation)
JAPIO KEYWORD:R102 (APPLIED ELECTRONICS -- Video Disk Recorders, VDR); R131 (INFORMATION PROCESSING -- Microcomputers & Microprocessers); R138 (APPLIED ELECTRONICS -- Vertical Magnetic & Photomagnetic Recording)

ABSTRACT
PROBLEM TO BE SOLVED: To provide a three-dimensional game device and an information storing medium in which background pictures such as a ground level and a water level with high quality can be synthesized by a small number of polygons.

SOLUTION: A long side is set in a horizontal scanning direction, the texture coordinate of each vertex of a rectangular polygon having height for one horizontal scanning segment is calculated, and visual field pictures including a picture in which plural rectangular polygons whose **texture** is **mapping** -processed based on this **texture** coordinate are arranged in a vertical scanning direction are composed. A virtual **view** **point** 30 and a virtual screen 32 for specifying a position relation with a texture **plane** 34 according to the position and direction of a **view** **point** and a visual line are set, each vertex of virtual rectangular polygons 36-0-36-239 arranged on the virtual screen 32 is projected to the texture **plane** 34 with the virtual **view** **point** 30 as a center of projection, and the texture coordinate of the projecting point is used as the texture coordinate of each vertex of the rectangular polygon. A distance (h) is changed for each rectangular polygon and each frame, and the wave of a water level is expressed.

11/5/19 (Item 7 from file: 347)

05705091 **Image available**
IMAGE PROCESSOR AND ITS PROCESSING METHOD

PUB. NO.: 09-319891 [JP 9319891 A]

PUBLISHED: December 12 1997 (19971212)
INVENTOR(s): SHINOHARA MIKIO
APPLICANT(s): SEGA ENTERP LTD [400891] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 08-140259 [JP 96140259]
FILED: June 03, 1996 (19960603)
INTL CLASS: [6] G06T-015/00; G09G-005/36; G09G-005/36
JAPIO CLASS: 45.9 (INFORMATION PROCESSING -- Other); 44.9 (COMMUNICATION -- Other)
JAPIO KEYWORD:R011 (LIQUID CRYSTALS)

ABSTRACT

PROBLEM TO BE SOLVED: To vary an image projected on the reflecting **surface** of an object in real time by generating image data to be projected on the reflecting **surface** according to **viewpoint** information corresponding to the reflecting **surface** and generating image data for a display screen according to **viewpoint** information corresponding to a display image.

SOLUTION: An object of a house 103 is projected onto the reflecting **surface** 104 of an object 100 of a building. The **viewpoint** 40, when a reflection map is drawn, is symmetrical with the visual point 30 as to the display screen with respect to the reflecting **surface** 104. On the basis of the **viewpoint** 40 and reflection lines 35 and 36, polygons of objects present in the visual field are processed, and data on a projected image are written to the reflection map. Then while the reflection **map** used similarly to an ordinary **texture map** is drawn (written) to a frame buffer according to the visual point 30.

11/5/20 (Item 8 from file: 347)
DIALOG(R)File 347:JAPIO

04989692 **Image available**
TEXTURE MAPPING METHOD AND IMAGE PROCESSOR

PUB. NO.: 07-282292 [JP 7282292 A]
PUBLISHED: October 27, 1995 (19951027)
INVENTOR(s): SENBON HIROYUKI
APPLICANT(s): TOSHIBA CORP [000307] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 06-067142 [JP 9467142]
FILED: April 05, 1994 (19940405)
INTL CLASS: [6] G06T-015/00; H04N-007/18
JAPIO CLASS: 45.9 (INFORMATION PROCESSING -- Other); 44.6 (COMMUNICATION -- Television)

ABSTRACT

PURPOSE: To obtain the system and device which greatly decreases an arithmetic quantity and prevents texture deformation that is caused before.

CONSTITUTION: For the **texture mapping** of a polygon in a three-dimensional space, the value of depth information Z is virtually given to all the pieces of vertex information in two-dimensional texture coordinates to form a **plane** in the three-dimensional space and arrange it virtually in a polygon space (**view point** coordinates); and liner transformation between vertexes of texture data corresponding to the respective vertexes of the polygon is performed and coordinate transformation processing is performed so that respective size coordinate values becomes equal. Then linear mapping is performed for respective pixels on the polygon by utilizing the coefficient and depth value Z of the linear transformation and inverse transformation for finding the coordinate values of the corresponding texture data is performed.

11/5/21 (Item 9 from file: 347)
DIALOG(R)File 347:JAPIO

04772593 **Image available**
TEXTURE SIMULATION DEVICE

PUB. NO.: 07-065193 [JP 7065193 A]
PUBLISHED: March 10, 1995 (19950310)
INVENTOR(s): TOMITA YUTAKA
EINAMI JIROU
APPLICANT(s): TOPPAN PRINTING CO LTD [000319] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 05-209761 [JP 93209761]
FILED: August 24, 1993 (19930824)
INTL CLASS: [6] G06T-015/00
JAPIO CLASS: 45.9 (INFORMATION PROCESSING -- Other)
JAPIO KEYWORD:R060 (MACHINERY -- Automatic Design)

ABSTRACT
PURPOSE: To repaste texture image data with high efficiency.

CONSTITUTION: This device is equipped with a data input means 2 for inputting three-dimensional data S(sub 1) on a body, light source information S(sub 3), and **view point** information S(sub 4), an image generating means 9 which generates a three- dimensional image, luminance data S(sub 2), and ray tracing data S(sub 5) from those data S(sub 1), S(sub 3), and S(sub 4), data generating means 10 and 11, a 1st storage means 12 which stores those data, a 2nd storage means 15 which stores a texture image S(sub 6), a **texture** image **mapping** means 17 which **maps** the **texture** image S(sub 6) selected from the 2nd storage means 15 into a three-dimensional image, and an image pasting means 20 which composes the **mapped texture** image S(sub 6) and the stored luminance data S(sub 2) and ray tracing data S(sub 5) together and pastes them on a **plane** specified by a **plane** specifying means 18; and the generation time of the three-dimensional image is shortened by omitting the calculation of the luminance data S(sub 2) and ray tracing data S(sub 5) at the time of texture image pasting.

11/5/22 (Item 10 from file: 347)
DIALOG(R)File 347:JAPIO

04676960 **Image available**
PICTURE SYNTHESIZING DEVICE AND GAME DEVICE USING THE SAME

PUB. NO.: 06-348860 [JP 6348860 A]
PUBLISHED: December 22, 1994 (19941222)
INVENTOR(s): TSUCHIDA MASAAKI
SASAKI TAKEHITO
APPLICANT(s): NAMCO LTD [472204] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 05-166494 [JP 93166494]
FILED: June 10, 1993 (19930610)
INTL CLASS: [5] G06F-015/72; A63F-009/22
JAPIO CLASS: 45.4 (INFORMATION PROCESSING -- Computer Applications); 30.2 (MISCELLANEOUS GOODS -- Sports & Recreation)

ABSTRACT
PURPOSE: To provide a real time display type picture synthesizing device in which the **surface** with projecting and recessing parts of a three-dimensional object can be simplified and expressed by the combination of a few polygons, and the picture of a high picture quality with a stereoscopic sensation can be synthesized.

CONSTITUTION: In a real time display type picture synthesizing device, a three- dimensional object expressed by combining the polygons in a vertual three-dimensional space is transformed in perspective projection on the projcting **surface** of a **view point** coordinate system, and a display picture is synthesized. This device is equipped with a texture information

storage means 42 which preliminarily stores the picture of each polygon obtained when the three-dimensional object is viewed from a prescribed angle in an oblique direction as texture information. Then, a picture forming part 44 operates the **mapping** of the corresponding **texture** information stored in the texture information storage means 42, forms the display picture, and displays it on a display 46 for the polygon of the three-dimensional object. Thus, the picture obtained when the three-dimensional object is viewed from the oblique direction can be expressed by a few polygons.

11/5/23 (Item 11 from file: 347)
DIALOG(R)File 347:JAPIO

04495468 **Image available**
EARTH **SURFACE** DISPLAY SYSTEM

PUB. NO.: 06-139368 [JP 6139368 A]
PUBLISHED: May 20, 1994 (19940520)
INVENTOR(s): HAGIWARA TOSHIYUKI
KAMEYAMA MASATOSHI
HIGO MOKICHI
APPLICANT(s): MITSUBISHI ELECTRIC CORP [000601] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 04-287907 [JP 92287907]
FILED: October 26, 1992 (19921026)
INTL CLASS: [5] G06F-015/72; G06F-015/62
JAPIO CLASS: 45.4 (INFORMATION PROCESSING -- Computer Applications)
JOURNAL: Section: P, Section No. 1789, Vol. 18, No. 445, Pg. 27, August 18, 1994 (19940818)

ABSTRACT

PURPOSE: To prevent the increase of the processing time for the image generation in accordance with the increase of the number of vertex due to the extension of a topographical range to be displayed and to prevent the degradation of image quality due to the decrease of the number of vertex by thinning vertexes, in an earth **surface** display system displaying a topography three- dimensionally.

CONSTITUTION: From **viewpoint** information on a **viewpoint** location, a remark **viewpoint** location, an angle of visibility, etc., which are necessary for the generation of a three-dimensional image inputted by an information input part 11, a topographical area to be a display object is determined by a display area analysis part 12, the thinning number of vertex and a display system are decided by a display system decision part 13 from the number of vertex of the topographical model data contained in the topographical area, and a three-dimensional topographical image is generated by a glow shading processing part 14 or a **texture mapping** processing part 15 in accordance with the determination.

11/5/24 (Item 12 from file: 347)
DIALOG(R)File 347:JAPIO

04311923 **Image available**
METHOD FOR GENERATING SIMULATED VISIBILITY

PUB. NO.: 05-303623 [JP 5303623 A]
PUBLISHED: November 16, 1993 (19931116)
INVENTOR(s): ENOMOTO YASUHIRO
APPLICANT(s): MITSUBISHI PRECISION CO LTD [401657] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 04-129829 [JP 92129829]
FILED: April 24, 1992 (19920424)
INTL CLASS: [5] G06F-015/62; G06F-015/72
JAPIO CLASS: 45.4 (INFORMATION PROCESSING -- Computer Applications)

JOURNAL: Section: P[redacted]ection No. 1698, Vol. 18, No. [redacted], Pg. 127, February 22, 1994 (19940222)

ABSTRACT

PURPOSE: To make a mapping of brightness which changes frame by frame on the topography and to make a simulation of illumination by **applying** the **texture** stored in a pattern memory on the light **plane** moving with the **view point** .

CONSTITUTION: A light **plane** 13 is a virtual one corresponding to a memory holding the shape and brightness of the illumination from a light source 12, which is not in the space of the earth coordinates in the database but kept in a brightness pattern 14 formed by the circular illumination. The direction and location of the light **plane** 13.is defined by a light vector L which coincides with the perpendicular down from a **view point** 11 to the light **plane** 13 and which is directed to illuminate the light source 12. The distance L from the original 130 of the light **plane** 13 to the **view point** 11 is kept constant and the direction moves with the **view point** 11 to be changed individually. A pilot sees the two-dimensional picture of the scene on the earth coordinates through a screen 15 from the **view point** 1.

17/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012672147 **Image available**
WPI Acc No: 1999-478254/199940
XRPX Acc No: N99-355988
Line data generating system for performing perspective transformation of visible stimuli
Patent Assignee: OXAAL F (OXAA-I)
Inventor: **OXAAL F**
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5936630	A	19990810	US 92990250	A	19921214	199940 B
			US 95478839	A	19950607	
			US 97813873	A	19970307	

Priority Applications (No Type Date): US 92990250 A 19921214; US 95478839 A 19950607; US 97813873 A 19970307
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5936630	A		19	G06T-015/20	Cont of application US 92990250 Cont of application US 95478839 Cont of patent US 5684937

Abstract (Basic): US 5936630 A
NOVELTY - Line data corresponding to initial curve data on an initial line is received from memory (60) and based on this arc length and angular rotation of initial curve data are adjusted with respect to end points of initial line and with respect to line angular rotation of initial line. An image processor (10) displays the adjusted initial curve data on display (20).
DETAILED DESCRIPTION - Line data and curve data in corresponding co-ordinate system are stored in memory (60). An INDEPENDENT CLAIM is also included for a line data generating method for performing the transformation of visible stimuli.
USE - In video game machine, calculator, motion pictures, television productions, theme park attractions, aircraft, etc.
ADVANTAGE - As the objects can be easily produced while maintaining visual similarity to their original shapes, the peripheral vision of view can be increased. Higher concentration of visually palpable information can be provided for a viewer as the objects are displayed without deteriorating the integrity of the object.
DESCRIPTION OF DRAWING(S) - The figure shows the on-line data generating apparatus.
Image processor (10)
Display (20)
Memory (60)
pp; 19 DwgNo 5/8
Title Terms: LINE; DATA; GENERATE; SYSTEM; PERFORMANCE; PERSPECTIVE; TRANSFORM; VISIBLE; STIMULUS
Derwent Class: T01
International Patent Class (Main): G06T-015/20
File Segment: EPI

17/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012506252 **Image available**
WPI Acc No: 1999-312357/199926
XRPX Acc No: N99-233291
Three hundred and sixty degree spherical visual data set producing method using cameras
Patent Assignee: OXAAL F (OXAA-I)
Inventor: **OXAAL F**

Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5903782	A	19990511	US 956800	A	19951115	199926	B
			US 96749166	A	19961114		

Priority Applications (No Type Date): US 956800 A 19951115; US 96749166 A 19961114
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5903782	A		9	G03B-029/00	Provisional application US 956800

Abstract (Basic): US 5903782 A

NOVELTY - The vertical axis plumb is aligned in predefined manner with respect to reference plane. A lens (2) is aligned such that the reference plane corresponds to plane of interest and a light source is fixed after which shooting is carried out using a camera (1). The lens is pivoted 180 degrees about the vertical axis and the procedure is repeated.

DETAILED DESCRIPTION - The field of view is represented by a hemisphere having a base which defines at least half space. The vertical axis passes through the center of reference plane. The reference plane coincides with base of hemisphere and the center with origin. The camera is supported by a monopod (3).

USE - For producing 360 degrees special visual data set to facilitate production of computer generated images.

ADVANTAGE - Digital camera may be employed avoiding the necessity of converting analog based picture into digital format to facilitate production of computer generated images using software algorithms.

DESCRIPTION OF DRAWING(S) - The figure shows a camera mounted on a monopod.

Camera (1)
Lens (2)
Monopod (3)
pp; 9 DwgNo 2/5

Title Terms: THREE; HUNDRED; SIXTY; DEGREE; SPHERE; VISUAL; DATA; SET; PRODUCE; METHOD; CAMERA
Derwent Class: P82; S06
International Patent Class (Main): G03B-029/00
File Segment: EPI; EngPI

17/5/3 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

011572799 **Image available**
WPI Acc No: 1997-549280/199750
XRPX Acc No: N97-458053

Method of perspective transformation of input to resultant visible stimuli for perspective generation system e.g flight simulator - involves differentiating number of rays vn by identifying number of corresponding points as set of first points in visible space, each of rays is specified with respect to reference half plane

Patent Assignee: OXAAL F (OXAA-I)
Inventor: **OXAAL F**
Number of Countries: 001 Number of Patents: Q01
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5684937	A	19971104	US 92990250	A	19921214	199750	B
			US 95478839	A	19950607		

Priority Applications (No Type Date): US 92990250 A 19921214; US 95478839 A 19950607
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5684937	A		18	G06T-015/20	Cont of application US 92990250

Abstract (Basic): US 5684[redacted]7 A

The method involves differentiating a number of rays vn by identifying a number of corresponding points as a set of first points in a visible space, each of the rays is specified with respect to a reference half plane. A viewpoint is disposed on one edge of the half plane and with a direction of vision function of the user coincident with one edge, a first angle theta denotes angular displacement between the half plane and a second half plane coincident with a respective one of ray vn.

A second angle psi denotes angular displacement between the direction of vision function and the respective one of the rays vn. Each respective second angle psi is scaled by a predetermined constant k to produce a respective scaled second angle psi . A set of second points is generated respectively corresponding to each of the first points based on the scaled second angles psi produced. The second points is projected on a display device to produce the output visible image. The output visible image corresponds to the second visual stimuli and having visual similarity to the first visual stimuli.

ADVANTAGE - Maintains visual similarity with input visible stimuli.

Dwg.2a/8

Title Terms: METHOD; PERSPECTIVE; TRANSFORM; INPUT; RESULT; VISIBLE; STIMULUS; PERSPECTIVE; GENERATE; SYSTEM; FLIGHT; SIMULATE; DIFFERENTIAL; NUMBER; RAY; IDENTIFY; NUMBER; CORRESPOND; POINT; SET; FIRST; POINT; VISIBLE; SPACE; RAY; SPECIFIED; RESPECT; REFERENCE; HALF; PLANE

Derwent Class: T01

International Patent Class (Main): G06T-015/20

File Segment: EPI

20/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

009108815 **Image available**
WPI Acc No: 1992-236246/199229
Related WPI Acc No: 1992-236243; 1992-236244; 1992-236245; 1992-236247; 1992-243952; 1992-268856
XRPX Acc No: N92-179876

Programmable computer graphics system - allows user to manipulate complex graphics object using Stencil, Translator, Clipper and pixel attribute modification commands

Patent Assignee: DU PONT PIXEL SYSTEMS LTD (DUPO); 3DLABS LTD (THRE-N)
Inventor: MACNAUGHTON I S; NEAVE J W; SALKILD J D; TREVETT N F; SALKILD D J
Number of Countries: 002 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
GB 2251772	A	19920715	GB 91360	A	19910109	199229	B
GB 2251772	B	19940810	GB 91360	A	19910109	199429	
US 5774133	A	19980630	US 9388725	A	19930707	199833	

Priority Applications (No Type Date): GB 91360 A 19910109; GB 91357 A 19910109; GB 91358 A 19910109; GB 91359 A 19910109; GB 91361 A 19910109; GB 91362 A 19910109
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
GB 2251772	A		190	G06F-015/72	
GB 2251772	B		3	G06F-015/72	
US 5774133	A			G06F-015/80	

Abstract (Basic): GB 2251772 A

The Stencil commands set the **envelope** set of pixels, within the total defined **image** space, which may be operated on. The Translator commands replicate and extend the envelope set defined by a Stencil command.

The Clipper commands select or deselect pixels of the envelope set, in parallel, for pixel-attribute operations. From the programmer's **point** of **view** , at least one of the registers is allowed to have an infinite (undefined) width, i.e. as wide as needed to accommodate all pixels of the objects being manipulated. None of pixel-attribute medication commands requires any count or list of number of pixels to be modified as a command agreement.

ADVANTAGE - Has high performance graphics and imaging capabilities

Title Terms: PROGRAM; COMPUTER; GRAPHIC; SYSTEM; ALLOW; USER; MANIPULATE; COMPLEX; GRAPHIC; OBJECT; STENCIL; TRANSLATION; CLIP; PIXEL; ATTRIBUTE; MODIFIED; COMMAND
Derwent Class: T01; W04
International Patent Class (Main): G06F-015/72; G06F-015/80
File Segment: EPI

20/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

008592206 **Image available**
WPI Acc No: 1991-096238/199114
XRAM Acc No: C91-041141
XRPX Acc No: N91-074399

Prism of transparent material presenting reflective subsurface image - with surface features to induce remote enveloping images

Patent Assignee: BALLESTEROS J M L (BALL-I)
Inventor: BALLESTERO F L; BALLESTERO J M L
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
FR 2650785	A	19910215	FR 8910894	A	19890809	199114	B

Priority Applications (N[redacted]ype Date): FR 8910894 A 1989080[redacted]

Abstract (Basic): FR 2650785 A

Decorative sculptures comprise prismatic bodies of transparent material which present a flat face (7) and have a recess in the vertical edge (3) behind the plane face in which the recess is a segment of a regular body such as another prism, a hot air balloon or a quarter or half of a regular structure such as a model building. Internal reflections viewed via the plane face result in the impression (9) of a solid body with a perspective which changes relative to the **point** of **view** . Features such as seabirds (8) or clouds etched or embossed in the plane (7) are flanking (5,6) faces of the prism, also appear to surround the reflective image and shift relative to it as the **viewpoint** changes from laterally or vertically. The prism may be made of polymethyl methacrylate, polycarbonate, glass or crystal. The recess to the rear may be provided by thermoforming or by hot tool engraving. Pref. the prism is mounted on a plinth. The top and bottom faces of the prism may be shaped and/or coated.

USE - For decorative, display or souvenir purpose, simple and robust provision of a deep three dimensional effect. (26pp Dwg.No.23/24

Title Terms: PRISM; TRANSPARENT; MATERIAL; PRESENT; REFLECT; SUBSURFACE; IMAGE; SURFACE; FEATURE; INDUCE; REMOTE; ENVELOP; IMAGE

Derwent Class: A14; A86; P78; P81

International Patent Class (Additional): B44C-005/00; G02B-027/02

File Segment: CPI; EngPI

20/5/3 (Item 1 from file: 347)

DIALOG(R)File 347:JAPIO

04004269 **Image available**

MIXTURE REFRIGERANT PHASE-BALANCE DISPLAY

PUB. NO.: 04-369369 [JP 4369369 A]

PUBLISHED: December 22, 1992 (19921222)

INVENTOR(s): YOSHIDA YUJI
FUNAKURA SHOZO
KODAMA HISASHI
ARITA KOJI

APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD [000582] (A Japanese Company or Corporation), JP (Japan)

APPL. NO.: 03-142945 [JP 91142945]

FILED: June 14, 1991 (19910614)

INTL CLASS: [5] F25B-049/02

JAPIO CLASS: 24.2 (CHEMICAL ENGINEERING -- Heating & Cooling)

JOURNAL: Section: M, Section No. 1411, Vol. 17, No. 248, Pg. 133, May 18, 1993 (19930518)

ABSTRACT

PURPOSE: To facilitate search of replacing refrigerant and specification of mixture composition by a method wherein phase-balance of three component system mixture refrigerant is calculated and the phase-balance of three components is displayed cubically so that changes of temperature and pressure corresponding to each component are known visibly.

CONSTITUTION: An input part 1 into which calculation conditions are inputted, a solver part 2 to calculate gas-liquid balance relationship by characteristic predication, a data filing part 3 to store calculation results a data extraction part 4 to extract a part of or all data, a coordinates changing part 6 to change to triangle-pole coordinates or triangle coordinates, and a smoothing part 5 to interpolate, if needed, values between the calculation results are provided. A plotting part 7 plots on an indicated triangle-pole coordinates or triangle coordinates, a curve generating part 8 generates **enveloped** curved surfaces and lines, and a dynamic **image** generating part 9 makes rotations and movements of **view point** , so that a display can be observed cubically from many angles.

02432579 **Image available**
THERMAL RECORDING MATERIAL

PUB. NO.: 63-049479 [JP 63049479 A]
PUBLISHED: March 02, 1988 (19880302)
INVENTOR(s): FURUYA HIROMI
TANIGUCHI KEIJI
APPLICANT(s): RICOH CO LTD [000674] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 61-193081 [JP 86193081]
FILED: August 18, 1986 (19860818)
INTL CLASS: [4] B41M-005/18; B41M-005/18
JAPIO CLASS: 29.4 (PRECISION INSTRUMENTS -- Business Machines); 14.3 (ORGANIC CHEMISTRY -- Dyes)
JAPIO KEYWORD: R042 (CHEMISTRY -- Hydrophilic Plastics)
JOURNAL: Section: M, Section No. 722, Vol. 12, No. 267, Pg. 126, July 26, 1988 (19880726)

ABSTRACT

PURPOSE: To obtain a thermal recording material having excellent recording properties such as color forming properties and being favorable in stability of images, by using a specified zinc complex as a color developer and jointly using at least one specified ether compound as an auxiliary component.

CONSTITUTION: A zinc complex of general formula (I), wherein R is an organic ligand capable of combining with zinc ion through a hetero-atom to form a complex, k is 2 or 4, and X is SCN or a halogen, is used as a color developer, and at least one ether compound of general formula (II), wherein R is a hydrocarbon group having at least one double bond, each of X and Y, which may be the same or different, is a lower alkyl, alkoxyl, aryl, aralkyl, acyloxyl or halogen, and each of m and n is independently an integer of 0-3, is jointly used as an auxiliary component, in a thermal recording material in which a thermal color forming layer comprising a leuco dye and a color developer is provided on a base. The zinc complex and the ether compound to be used are preferably those having a melting point of 40-150 deg.C, from the **viewpoints** of preservation stability and sensitivity of the thermal recording material. With this arrangement, a thermal recording material can be obtained which has sufficient developed color density and color forming sensitivity, is suitable for high-speed recording, has high ground brightness, is free of development of ground color or decoloration of developed color part even upon contact with oils, plasticizers or the like, and is free of lowering of **image** density even upon contact with water, such as **immersion** in water.

21/TI/1 (Item 1 from file: 350)
DIALOG(R)File 350:(c) 2000 Derwent Info Ltd. All rts. reserv.

Integral virtual reality, image recording and projection audiovisual appts. - has alternating images for left and right eye projected onto screen with sensors to allow image **search to obtain** immersion **effect**

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>File 348:European Patents 1978-2000/Sep W04
         (c) 2000 European Patent Office
 File 349:PCT Fulltext 1983-2000/UB=20000921, UT=20000908
         (c) 2000 WIPO/MicroPat

Set     Items   Description
S1        696   P()(SURFACE? OR SPHERE? OR PLANE? ?) OR PSURFACE? OR PSPHE-
            RE?
S2      47241   VIEWPOINT? OR VIEW(1N)POINT? ? OR DIRECTION(1W)VIEW? ?
S3       1379   (TEXTURE? OR TEXEL?)(5N)(MAP? ? OR MAPP? OR APPLICATION? OR
             APPLY?)
S4       1115   ((FULL? ? OR COMPLETE? OR TOTAL? OR ENTIRE?)(2N)SURROUND? -
            OR WRAP?()AROUND OR IMMERS????)(5N)(SCENE? ? OR IMAGE? OR DATA
             OR PICTURE? ? OR GRAPHIC? ?)
S5         73   SAMPL?(5N)(VISIBLE OR VIRTUAL OR DIGITAL)(3N)(WORLD? OR SP-
            ACE OR ENVIRON?)
S6          1   S1(S)S2(S)S3(S)(S4 OR S5)
S7          1   S2(S)S3(S)(S4 OR S5)
S8          0   S7 NOT S6
S9        100   S2(S)(S3 OR S4 OR S5)
S10    661643   SURFACE?  OR PLANE OR PLANES OR SPHERE?
S11        48   S9(S)S10
S12        13   S10(5N)S2(S)(S3 OR S4 OR S5)
S13         3   S1(S)(S3 OR S4 OR S5)
S14         2   S13 NOT (S6 OR S12)
S15         0   AU=OXAAL F?
```

6/5,K/1 (Item 1 from file: 349)
DIALOG(R)File 349:PCT Fulltext

00717132

ADVANCED DEFERRED SHADING GRAPHICS PIPELINE PROCESSOR
PROCESSEUR PIPELINE GRAPHIQUE EVOLUE A OMBRAGE DIFFERE

Patent Applicant/Assignee:
APPLE COMPUTER INC, APPLE COMPUTER, INC. , 1 Infinite Loop, Cupertino, CA 95014-2084 , US

Inventor(s):
DULUK Jerome F Jr, DULUK, Jerome, F., Jr. , 950 North California Drive, Palo Alto, CA 94303 , US
HESSEL Richard E, HESSEL, Richard, E. , 3225 Flemington Court, Pleasanton, CA 94588 , US
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HSU Hengwei, HSU, Hengwei , 4209 Canfield Drive, Fremont, CA 94536 , US
LI Sidong, LI, Sidong , 5598 LeFevre Drive, San Jose, CA 95118 , US
NG Sam, NG, Sam , 34377 Maybird Circle, Fremont, CA 94555 , US
PAPAKIPOS Matthew N, PAPAKIPOS, Matthew, N. , 1701 Oak Avenue, Menlo Park, CA 94025 , US
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TRIVEDI Sushma S, TRIVEDI, Sushma, S. , 1208 Rembrandt Drive, Sunnyvale, CA 94087 , US
TUCK Nathan D, TUCK, Nathan, D. , 8666 Somerset Avenue, San Diego, CA 92123 , US
GO Shun Wai, GO, Shun, Wai , 370 Sandhurst Drive, Milpitas, CA 95035 , US
FUNG Lindy, FUNG, Lindy , 358 Pescadero Terrace, Sunnyvale, Ca 94086 , US
NGUYEN Tuan D, NGUYEN, Tuan, D. , 5327 Birch Grove Drive, San Jose, CA 95123 , US
GRASS Joseph P, GRASS, Joseph, P. , 357 Lennox Avenue, Menlo Park, CA 94025 , US
HONG Bor-Shyue, HONG, Bor-Shyue , 2325 Oak Flat Road, San Jose, CA 95131 , US
MAMMEN Abraham, MAMMEN, Abraham , 2780 Lylewood Drive, Pleasanton, CA 94588 , US
RASHID Abbas, RASHID, Abbas , 34369 Eucalyptus Terrace, Fremont, CA 94555-1982 , US
TSAY Albert Suan-Wei, TSAY, Albert, Suan-Wei , 38129 Cambridge Court, Fremont, CA 94536 , US

Patent and Priority Information (Country, Number, Date):
Patent: WO 0030040 A1 20000525 (WO 200030040)
Application: WO 99US18971 19990820 (PCT/WO US9918971)
Priority Application: US 9897336 19980820; US 98213990 19981217
Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
Main International Patent Class: G06T-015/00;
International Patent Class: G06T-017/00; G06T-011/40; G06T-011/00;

Publication Language: English
Filing Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 181852

English Abstract
A graphics pipeline processor that extracts (4000), sorts (6000) and renders pixel fragments. The processor applies texture (12000) and one of various fragment operations (11000).

French Abstract
L'invention concerne un processeur pipeline graphique qui extrait (4000), trie (6000) et restitue des fragments de pixels. Ce processeur applique une texture (12000) et realise une operation sur fragments parmi une pluralite d'operations sur les fragments (11000).

Fulltext Availability:
Detailed Description

Detailed Description
... 3-Dimensional animation is achieved by displaying a sequence of images. Interactive 3-Dimensional (3D) computer graphics allows a user to change his or her **viewpoint** or to change the geometry in real time, thereby requiring the rendering system to create new images on-the-fly in real-time. Therefore, real...screen buffer that is displayed on the monitor by scanning-out the pixel colors at refresh rate. It also holds off-screen overlay and buffers (**p** -buffers), display lists and vertex arrays, and accumulation buffers. The screen buffer and the 3D p-buffers can be dual buffered. In one embodiment, FRM...
?

12/5,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:European Patents

01045320
Imaging processing apparatus
Bilderzeugungsgerat
Appareil de creation d'image
PATENT ASSIGNEE:
SHIMA SEIKI MANUFACTURING, LTD., (1257392), 85, Sakata, Wakayama 641-8511 , (JP), (applicant designated states: AT;BE;CH;CY;DE;DK;ES;FI;FR;GB;GR;IE;IT;LI;LU;MC;NL;PT;SE)
INVENTOR:
Nagashima, Hiroshi, 3-1-3 Takasho-machi, Wakayama, (JP)
LEGAL REPRESENTATIVE:
Jackson, Robert Patrick (80311), Frank B. Dehn & Co., European Patent Attorneys, 179 Queen Victoria Street, London EC4V 4EL, (GB)
PATENT (CC, No, Kind, Date): EP 924642 A2 990623 (Basic)
APPLICATION (CC, No, Date): EP 98310599 981222;
PRIORITY (CC, No, Date): JP 36579797 971222
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE
INTERNATIONAL PATENT CLASS: G06T-001/20;

ABSTRACT EP 924642 A2
A bump image for a three-dimensional model of an object is stored and modified as well as a texture image in a rendering stage. A reverse mapping address to the texture image and the bump image is stored in a rendering memory to obtain a drawing object address for the texture image according to the address in the rendering memory.
ABSTRACT WORD COUNT: 61

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 990623 A2 Published application (A1with Search Report ;A2without Search Report)
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9925	253
SPEC A	(English)	9925	3648
Total word count - document A			3901
Total word count - document B			0
Total word count - documents A + B			3901

...SPECIFICATION and stores the impearmeability of each pixel (alpha) in 8 bit length for example. In the Z data layer 61, the Z value specifies the **surface** position for the **viewpoint** in 32 bit length for example. That is, the smaller the Z value is, the closer to the viewpoint, and the larger the Z value is, the farther to the viewpoint. The reverse mapping address layer 62 stores the reverse mapping address M' for the reverse **mapping** of each pixel to the **texture** image and the bump image in 32 bit length for example. 64 is a display area in the rendering image, and the image in the...

12/5,K/2 (Item 2 from file: 348)
DIALOG(R)File 348:European Patents

01043210
METHOD AND SYSTEM FOR MULTIPLEXING IMAGE SIGNAL, METHOD AND SYSTEM FOR DEMULTIPLEXING IMAGE SIGNAL, AND TRANSMISSION MEDIUM
VERFAHREN UND VORRICHTUNG ZUR MULTIPLEXIERUNG UND DEMULTIPLEXIERUNG VON BILDSIGNALEN SOWIE UBERTRAGUNGSMEDIUM
PROCEDE ET SYSTEME DE MULTIPLEXAGE D'UN SIGNAL IMAGE, PROCEDE ET SYSTEME DE DEMULTIPLEXAGE D'UN SIGNAL IMAGE, ET SUPPORT DE TRANSMISSION
PATENT ASSIGNEE:
Sony Corporation, (214028), 7-35, Kitashinagawa 6-chome, Shinagawa-ku,

Tokyo 141-0001, (JP), applicant designated states:
AT;BE;CH;DE;ES;FI;FR;GB;IT;LI;NL)
INVENTOR:
SUZUKI, Teruhiko, Sony Corporation, 7-35, Kitashinagawa 6-chome, Shinagawa-ku, Tokyo 141-0001, (JP)
YAGASAKI, Yoichi, Sony Corporation, 7-35, Kitashinagawa 6-chome, Shinagawa-ku, Tokyo 141-0001, (JP)
LEGAL REPRESENTATIVE:
Melzer, Wolfgang, Dipl.-Ing. et al (8278), Patentanwalte Mitscherlich & Partner, Sonnenstrasse 33, 80331 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 933939 A1 990804 (Basic)
WO 9904566 990128
APPLICATION (CC, No, Date): EP 98932580 980717; WO 98JP3235 980717
PRIORITY (CC, No, Date): JP 19364197 970718
DESIGNATED STATES: AT; BE; CH; DE; ES; FI; FR; GB; IT; LI; NL
INTERNATIONAL PATENT CLASS: H04N-007/08;
CITED PATENTS (WO A): JP 10004539 A
CITED REFERENCES (WO A):
MINORU EITO, "Trend of MPEG4 Moving Picture Coding Standization (in Japanese)", TECHNICAL REPORT OF IEICE, Vol. 95, No. 469, 1996, (Tokyo), p. 55-60.
TOSHIO MIKI, TOSHIRO KAWAHARA, TOMOYUKI OYA, SANAE HOYA, "Trend in Standardization of MPEG4 (in Japanese)", TECHNICAL REPORT OF IEICE, Vol. 95, No. 539, 1996, (Tokyo), p. 43-48.
MINORU EITO, "Trend in Standardization of MPEG4 (in Japanese)", THE JOURNAL OF THE INSTITUTE OF IMAGE ELECTRONICS ENGINEERS OF JAPAN, Vol. 25, No. 3, 1996, (Tokyo), p. 223-228.
KOTARO ASAI, "MPEG4 Video verification Model (in Japanese)", PREPRINTS OF 1996 WINTER MEETING OF IMAGE MEDIA SECTION, THE INSTITUTE OF TELEVISION ENGINEERS OF JAPAN, December 1996, (Tokyo), p. 33-38.;

ABSTRACT EP 933939 A1
A scene descriptor SD, object descriptors ODs and respective bitstreams ESs are separated by a demultiplexer circuit, and the respective bitstreams ESs are decoded by decoders 207-1 to 207-n. Within output data from the decoders, output data associated with the same object descriptor OD (output data composing the same object) are mixed by a mixer circuit 261. Subsequently, the mixed output data is supplied to an object synthesizer circuit 271-i of a synthesizer circuit 252 which is supplied with a corresponding node. Then, the object synthesizer circuit 271-i corresponds one image to one object to perform texture mapping.
ABSTRACT WORD COUNT: 99

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application:	990616	A1	International application (Art. 158(1))
Application:	990804	A1	Published application (A1with Search Report ;A2without Search Report)
Examination:	990804	A1	Date of filing of request for examination: 990318
Search Report:	991222	A1	Date of drawing up and dispatch of supplementary:search report 19991105
Change:	991222	A1	International Patent Classification changed: 19991030
Change:	991222	A1	International Patent Classification changed: 19991030

LANGUAGE (Publication,Procedural,Application): English; English; Japanese
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9931	1953
SPEC A	(English)	9931	12660
Total word count - document A			14613
Total word count - document B			0
Total word count - documents A + B			14613

...SPECIFICATION predetermined texture and a signal indicative of its transparency from the memory 152 and the memory 153 based on the three-dimensional object information, and **maps** the **texture** to the three-dimensional object. The signal representative of the transparency

indicates the transparency of the texture at a corresponding location, and therefore indicates the transparency of the object at the position to which the **texture** at the corresponding position is **mapped** . The rendering circuit 155 supplies a two-dimensional transform circuit 156 with a signal of the object to which the **texture** has been **mapped** . The two-dimensional transform circuit 156 in turn transforms the three-dimensional object to a two-dimensional image signal produced by mapping the three-dimensional object to a two-dimensional **plane** based on **view point** information supplied from the outside. The three-dimensional object transformed into a two-dimensional image signal is further outputted to the outside. The texture may...outputted to the two-dimensional transform circuit 156.

The two-dimensional transform circuit 156.is supplied with two-dimensional or three-dimensional objects, to which **textures** have been **mapped** , from the object synthesizer circuits 271-1 to 271-n, the number of which is equal to that of the nodes. The two-dimensional transform circuit 156 maps a three-dimensional object to a two-dimensional **plane** based on **view point** information supplied from the outside and the signals indicative of the position and the size of the image (POS, SZ) to transform the three-dimensional...

12/5,K/3 (Item 3 from file: 348)

01029171

Image processing method and apparatus with polygon division
Bildverarbeitungsgerat und Verfahren mit Polygonteilung
Appareil et procede de traitement d'images avec division de polygones

PATENT ASSIGNEE:
NEC CORPORATION, (236690), 7-1, Shiba 5-chome Minato-ku, Tokyo, (JP), (applicant designated states: AT;BE;CH;CY;DE;DK;ES;FI;FR;GB;GR;IE;IT;LI;LU;MC;NL;PT;SE)
INVENTOR:
Kawasaki, Tomuyuki NEC IC Microcomputer Syst. Ltd., 403-53, Kosugimachi 1-chome, Nakahara-ku, Kawasaki-shi, Kanagawa, (JP)
LEGAL REPRESENTATIVE:
Glawe, Delfs, Moll & Partner (100692), Patentanwalte Postfach 26 01 62, 80058 Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 917106 A2 990519 (Basic)
APPLICATION (CC, No, Date): EP 98121237 981106;
PRIORITY (CC, No, Date): JP 97315655 971117
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE
INTERNATIONAL PATENT CLASS: G06T-015/10;

ABSTRACT EP 917106 A2

In an image processing apparatus, a polygon dividing section (16) selectively divides each of a set of polygons approximately representing a three-dimensional object based on a geometric data of the polygon and a reference data to convert the set of polygons into a new set of polygons. A brightness calculating section (18) calculates a brightness of each of apexes of each of the new set of polygons to represent the three-dimensional object when a light is irradiated to the three-dimensional object. A display control section (12) displays a three-dimensional image corresponding to the three-dimensional object viewed from a viewpoint on a display unit with the calculated brightnesses.

ABSTRACT WORD COUNT: 108

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 990519 A2 Published application (A1with Search Report ;A2without Search Report)
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9920	1296
SPEC A	(English)	9920	5032

Total word count - document A 6328
Total word count - document B 0
Total word count - documents A + B 6328

...SPECIFICATION plane deleting section 21 has a function of giving a limitation to remove the display of an image portion which cannot be viewed from the **viewpoint** . The hidden **plane** deleting section 21 receives the polygon having the screen coordinates, the brightness and the **texture mapping** address from the screen projecting section 19 as each apex data. Then, the hidden plane deleting section 21 interpolates each apex data and determines a...

12/5,K/4 (Item 4 from file: 348)
DIALOG(R)File 348:European Patents

00985938
Image compression
Bildkompression
Compression d'images
PATENT ASSIGNEE:
TEXAS INSTRUMENTS INC., (279076), 13500 North Central Expressway, Dallas, Texas 75243, (US), (applicant designated states: AT;BE;CH;CY;DE;DK;ES;FI;FR;GB;GR;IE;IT;LI;LU;MC;NL;PT;SE)
INVENTOR:
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LEGAL REPRESENTATIVE:
Potter, Julian Mark et al (80064), D. Young & Co., 21 New Fetter Lane, London EC4A 1DA, (GB)
PATENT (CC, No, Kind, Date): EP 892557 A1 990120 (Basic)
APPLICATION (CC, No, Date): EP 98305736 980717;
PRIORITY (CC, No, Date): US 53043 P 970718
DESIGNATED STATES: DE; FR; GB; IT; NL
INTERNATIONAL PATENT CLASS: H04N-007/26;

ABSTRACT EP 892557 A1
A method of image encoding using subband decomposition followed by modified zerotree coding with symbols for zero and significant zerotree roots and isolated zeroes and isolated significant coefficients.
ABSTRACT WORD COUNT: 29

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 990120 A1 Published application (A1with Search Report ;A2without Search Report)
Examination: 990714 A1 Date of filing of request for examination: 990517
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9903	127
SPEC A	(English)	9903	7221
Total word count - document A			7348
Total word count - document B			0
Total word count - documents A + B			7348

...SPECIFICATION a recent architecture that takes use of JPEG-based compression for texture mapping. The preferred embodiment algorithm can also be applied here to achieve efficient **texture mapping** .
The Mip **texture mapping** technique utilizes multiresolution representation of a image to reduce computation in **texture mapping** . In traditional Mip **mapping** , a pyramid of images of various resolutions is generated and stored, which can take up to 1 1/3 storage space of the original image...

...a lookup table for each 64x64 blocks similar to the chunking technology adopted in Tallisman. The graphic hardware can choose the resolution and

quality (bit-**plane**) according to the **view point** and code the needed blocks. This technology enables storing of large size images on the graphic board as well as flexibility in choosing the resolution...

12/5,K/5 (Item 5 from file: 348)
DIALOG(R)File 348:European Patents

00816245
A volume rendering apparatus and method
Verfahren und Vorrichtung zur Volumendarstellung
Methode et appareil de rendu d'un volume
PATENT ASSIGNEE:
MITSUBISHI DENKI KABUSHIKI KAISHA, (208580), 2-3, Marunouchi 2-chome Chiyoda-ku, Tokyo 100, (JP), (applicant designated states: DE;FR;GB)
INVENTOR:
Negishi, Hiroyasu, c/o Mitsubishi Denki K.K., 2-3, Marunouchi 2-chome, Chiyoda-ku, Tokyo 100, (JP)
Kameyama, Masatoshi, c/o Mitsubishi Denki K.K., 2-3, Marunouchi 2-chome, Chiyoda-ku, Tokyo 100, (JP)
LEGAL REPRESENTATIVE:
Pfenning, Meinig & Partner (100961), Mozartstrasse 17, 80336 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 758118 A2 970212 (Basic)
EP 758118 A3 980311
APPLICATION (CC, No, Date): EP 96110667 960702;
PRIORITY (CC, No, Date): JP 95203191 950809
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: G06T-017/00; G06T-011/00;

ABSTRACT EP 758118 A2
Volume rendering apparatus including a voxel memory, a parameter provider, an address generator, a mapping unit, an image memory and a blender. The voxel memory stores original volume data. A parameter provider calculates a parameter of a volume plane which slices the volume object orthogonally to a direction of view, calculates a parameter of a three-dimensional mapping plane which slices the mapping object according to a point of view coordinate system and converts the three-dimensional mapping plane to a two-dimensional mapping plane. An address generator generates voxel memory addresses and image memory addresses and a mapping unit maps the volume plane on each of the mapping planes. An image memory stores mapping data and rendering data and a blender performs blending of data in the image memory and data on each of the mapping planes and writes the blended data back in the image memory.
ABSTRACT WORD COUNT: 146

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 970212 A2 Published application (A1with Search Report ;A2without Search Report)
Change: 980304 A2 Obligatory supplementary classification (change)
Search Report: 980311 A3 Separate publication of the European or International search report
Examination: 980422 A2 Date of filing of request for examination: 980226
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPAB97	836
SPEC A	(English)	EPAB97	10215
Total word count - document A			11051
Total word count - document B			0
Total word count - documents A + B			11051

...SPECIFICATION volume data and a mapping object corresponding to the volume object, receiving a direction of view for the volume object, generating a plurality of volume **planes** orthogonal to the **direction**

of **view** and a plurality of mapping **planes** corresponding to the volume object, performing two-dimensional **texture mapping** for each of the plurality of mapping planes by using each of the plurality of volume planes as a texture plane, and blending three-dimensional...

12/5,K/6 (Item 6 from file: 348)
DIALOG(R)File 348:European Patents

00766483
Perspective correction of texture in graphics by adaptive approximation
Perspektifkorrektur von Texturen in graphischen Bildern durch adaptives Annahern
Correction de perspective de texture d'images graphiques par approximation adaptive
PATENT ASSIGNEE:
SUN MICROSYSTEMS, INC., (1392730), 2550 Garcia Avenue, Mountain View, CA 94043, (US), (applicant designated states: DE;GB;SE)
INVENTOR:
Donovan, Walter E., 647 Escuela Place, Milpitas, California 95036, (US)
LEGAL REPRESENTATIVE:
W.P. Thompson & Co. (101051), Coopers Building, Church Street, Liverpool L1 3AB, (GB)
PATENT (CC, No, Kind, Date): EP 718797 A2 960626 (Basic)
EP 718797 A3 960814
APPLICATION (CC, No, Date): EP 95309215 951219;
PRIORITY (CC, No, Date): US 358284 941219
DESIGNATED STATES: DE; GB; SE
INTERNATIONAL PATENT CLASS: G06T-015/00; G06T-015/10;
ABSTRACT EP 718797 A3
The present invention provides a computer graphics system with a texel value generator capably of generating texel values using a minimal amount of computationally intensive divisions while maintaining a selectable texel accuracy criteria along a scan line. This is accomplished by adaptively selecting divisional points which delineate the scan line segments along each scan line such that the divisional points are as widely spaced as possible without exceeding the selected texel accuracy criteria. Having selected the texel accuracy criteria, such as a texel error bound optimally spaced, divisional points along the scan lines are selected as a function of the selected accuracy criteria. In general, since texture gradients are not evenly distributed over the surface of a given object and texture variations are present between different objects of the image, it is advantageous to adaptively select division points one at a time, skipping as many pixels in between divisional points as the local texture gradient will allow. Accurate texel values are computed at these divisional points and also at the end points of the scan line. Approximate texel values are then computed for the pixels located between adjacent pair of divisional points along the scan line using a suitable scheme such as linear interpolation. (see image in original document)
ABSTRACT WORD COUNT: 230

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application:	960626 A2	Published application (A1with Search Report ;A2without Search Report)
Change:	960731 A2	Obligatory supplementary classification (change)
Search Report:	960814 A3	Separate publication of the European or International search report
Examination:	970205 A2	Date of filing of request for examination: 961211

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPAB96	1091
SPEC A	(English)	EPAB96	2869
Total word count - document A			3960

Total word count - documents B 0
Total word count - documents A + B 3960

...SPECIFICATION normal, transparency or other surface property applied to a surface of a graphics object in such a way that the pattern appears attached to the **surface** as the **viewpoint** and perspective varies. In order to realistically display three dimensional objects in a high quality two dimensional image on the display device, a perspectively correct **texture mapping** value, called a **texel** value, is generated for each pixel to modify the pixel values of the image.

Mathematical models have been employed to provide excellent image quality but...

12/5,K/7 (Item 7 from file: 348)
DIALOG(R)File 348:European Patents

00643321
Method and apparatus for an adaptive texture mapping controller
Verfahren und Vorrichtung zur adaptiven Steuerung der Texturabbildung
Methode et dispositif adaptif de controle de topographie de texture
PATENT ASSIGNEE:
SUN MICROSYSTEMS, INC., (1392732), 2550 Garcia Avenue, Mountain View, California 94043-1100, (US), (Proprietor designated states: all)
INVENTOR:
Kamen, Yakov, 19334 Greenwood Drive, Cupertino, California 95014, (US)
Sabada, Uma, 3475 Granada Avenue, Nr. 386, Santa Clara, California 95051, (US)
LEGAL REPRESENTATIVE:
Wombwell, Francis (46021), Potts, Kerr & Co. 15, Hamilton Square, Birkenhead Merseyside L41 6BR, (GB)
PATENT (CC, No, Kind, Date): EP 622747 A2 941102 (Basic)
EP 622747 A3 950201
EP 622747 B1 000531
APPLICATION (CC, No, Date): EP 94301239 940222;
PRIORITY (CC, No, Date): US 41073 930401
DESIGNATED STATES: DE; FR; IT; NL; SE
INTERNATIONAL PATENT CLASS: G06F-015/10
CITED PATENTS (EP B): EP 550244 A
CITED REFERENCES (EP B):
GRAND PRIX. SUPPLEMENT TECHNIQUE, 1991, TETBURY UK pages 1 - 20;

ABSTRACT EP 622747 A2

The present invention provides a method and apparatus for an adaptive texture mapping controller which provides a way for computer graphics system users or other functions in a graphical display system, to trade off object image rendering speed for object image texture quality. This trade-off is accomplished by providing a plurality of control signals to the adaptive texture mapping controller which indicate the level of texture quality that the user or other function desires. Upon recognizing these control signals, the adaptive texture mapping controller selects a computation method to be used in generating pixel values necessary to provide the desired level of image texture quality.

The adaptive texture mapping controller is able to determine an appropriate method for calculating the end points of span sections of scan lines to be used for the display, based upon a function of the knot parameters which correspond to the vertices which describe each edge of a polygon section of the projected object and one or more of the control signals provided, and then to determine an appropriate interpolation method for calculating the pixel values for pixels on each span chosen, based on a function of the span end points and one or more of the control signals provided. These functions of the distance between knot parameters on a polygon edge or the distance between end points of a span can be mathematical functions of pairs of knot parameters or pairs of end points respectively.

The adaptive texture mapping controller is able to determine an appropriate computation method for a given one of a plurality of

hierarchical levels of [redacted]age parameter calculation, whe[redacted]a set of control signals is supplied for each level. (see image in original document)
ABSTRACT WORD COUNT: 286
NOTE:
Figure number on first page: 4

LEGAL STATUS (Type, Pub Date, Kind, Text):

Grant:	000531	B1	Granted patent
Application:	941102	A2	Published application (A1with Search Report ;A2without Search Report)
Search Report:	950201	A3	Separate publication of the European or International search report
Examination:	950628	A2	Date of filing of request for examination: 950501
Examination:	981216	A2	Date of despatch of first examination report: 981030
Change:	990901	A2	International Patent Classification changed: 19990713

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	200022	1402
CLAIMS B	(German)	200022	1367
CLAIMS B	(French)	200022	1746
SPEC B	(English)	200022	4824
Total word count - document A			0
Total word count - document B			9339
Total word count - documents A + B			9339

12/5,K/8 (Item 8 from file: 348)
DIALOG(R)File 348:European Patents

00386369
Method and apparatus for displaying a translucent object
Anzeigeverfahren und -gerat fur ein durchsichtiges Objekt
Methode et appareil pour afficher un objet translucide
PATENT ASSIGNEE:
DAIKIN INDUSTRIES, LIMITED, (605933), Umeda Center Building, 4-12 Nakazaki-nishi 2-chome, Kita-ku, Osaka-shi, Osaka-fu 530, (JP), (applicant designated states: DE;FR;GB)
INVENTOR:
Obata, Koei, Daikin Higashikusatsu Shataku, No. 4-207, 40, Higashikusatsu 5-chome, Kusatsu-shi, Shiga, 525, (JP)
LEGAL REPRESENTATIVE:
Prufer, Lutz H., Dipl.-Phys. (38291), Harthauser Strasse 25d, 81545 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 379225 A2 900725 (Basic)
EP 379225 A3 920805
EP 379225 B1 970402
APPLICATION (CC, No, Date): EP 90101246 900122;
PRIORITY (CC, No, Date): JP 8912158 890120
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: G06T-015/00; G01N-021/47;
CITED PATENTS (EP A): EP 137233 A

ABSTRACT EP 379225 A2
A method for displaying a translucent object on a display screen is disclosed which includes a step of displaying a translucent object by providing a diffused transmitted light component (Itr) instead of a diffused reflection light component (Idiff) and a specular reflection light component (Ispec) as are necessary for displaying an object as an opaque object. A method for displaying a translucent object on a screen is also disclosed which includes a step of judging whether or not an object to be displayed is to be displayed as a translucent object based upon the relation of the viewpoint and a light source (L1, L2) to the

object to be displayed (see image in original document)
ABSTRACT WORD COUNT: 119

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 900725 A2 Published application (Alwith Search Report ;A2without Search Report)
Search Report: 920805 A3 Separate publication of the European or International search report
Examination: 930107 A2 Date of filing of request for examination: 921104
Examination: 950426 A2 Date of despatch of first examination report: 950314
Grant: 970402 B1 Granted patent
Lapse: 980114 B1 Date of lapse of the European patent in a Contracting State: DE 970703
Lapse: 980114 B1 Date of lapse of the European patent in a Contracting State: DE 970703, FR 970829
Oppn None: 980325 B1 No opposition filed
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	759
CLAIMS B	(English)	EPAB97	533
CLAIMS B	(German)	EPAB97	500
CLAIMS B	(French)	EPAB97	599
SPEC A	(English)	EPABF1	4710
SPEC B	(English)	EPAB97	4010
Total word count - document A			5469
Total word count - document B			5642
Total word count - documents A + B			11111

...SPECIFICATION similar to its actual appearance.
When a similar display is to be obtained by using conventional method, the band is mapped on the nearest-the-**viewpoint surface** in a portion through which the band is to be seen by a **texture mapping** method. The color of the band to be mapped is determined to be faint, corresponding to how the band would be seen through the paper...

...SPECIFICATION similar to its actual appearance.
When a similar display is to be obtained by using conventional method, the band is mapped on the nearest-the-**viewpoint surface** in a portion through which the band is to be seen by a **texture mapping** method. The color of the band to be mapped is determined to be faint, corresponding to how the band would be seen through the paper...

12/5,K/9 (Item 9 from file: 348)
DIALOG(R)File 348:European Patents

00273503
A method for modulating color for effecting color cell texture.
Farbmodulationsverfahren zur Texturausfuhrung von Farbzellen.
Methode de modulation de couleur pour effectuer la texturation de cellule couleur.
PATENT ASSIGNEE:
GENERAL ELECTRIC COMPANY, (203903), 1, River Road, Schenectady New York 12345, (US), (applicant designated states: DE;FR;GB;IT)
INVENTOR:
Chandler, Jimmy Everett, 4325 South Atlantic Avenue, Ponce Inlet Florida 32019, (US)
Fadden, Richard Gerry, 195 Cambridge Court, Ormond Beach Florida 32074, (US)
LEGAL REPRESENTATIVE:
Pratt, Richard Wilson et al (46454), London Patent Operation G.E. TECHNICAL SERVICES CO. INC. Burdett House 15/16 Buckingham Street, London WC2N 6DU, (GB)
PATENT (CC, No, Kind, Date): EP 272863 A2 880629 (Basic)

APPLICATION (CC, No, Date): EP 87311023 871215;
PRIORITY (CC, No, Date): US 943690 861219
DESIGNATED STATES: DE; FR; GB; IT
INTERNATIONAL PATENT CLASS: G06F-015/72;
CITED PATENTS (EP A): FR 2588405 A

ABSTRACT EP 272863 A2

A full color real time cell texture generator uses a quantization scheme, preferably a tapered quantization scheme (402-412), which establishes a small set of colors representative of all colors of a source image. A source image to be displayed is quantized (414) by selecting the color of the small set nearest the color of the source image for each cell of the source image. Nearness can be measured as Euclidian distance in a three-space coordinate system of the primary colors: red, green and blue. In a specific embodiment, an 8-bit modulation code is used to control each of the red, green, blue and translucency content of each display pixel, thereby permitting independent modulation for each of the colors forming the display image.

ABSTRACT WORD COUNT: 126

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application:	880629 A2	Published application (A1with Search Report ;A2without Search Report)
Search Report:	910206 A3	Separate publication of the European or International search report
Examination:	910918 A2	Date of filing of request for examination: 910715
Change:	920408 A2	Representative (change)
Withdrawal:	920415 A2	Date on which the European patent application was withdrawn: 920204

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	813
SPEC A	(English)	EPABF1	4168
Total word count - document A			4981
Total word count - document B			0
Total word count - documents A + B			4981

...SPECIFICATION images in this way for computer image generation is called cell texturing.

The mathematics for determining the strike-point of a view ray from a **view point** to a parametrically defined curved **surface** is sufficiently complex so that typically a large amount of hardware, which may include a vector processor, is required to **apply** cell **texture** to such surfaces in real time systems. The vector processor performs computations for mapping video information from cells into display pixels of the scene to...

12/5,K/10 (Item 1 from file: 349)
DIALOG(R)File 349:PCT Fulltext

00728241
INTERACTIVE RACE CAR SIMULATOR SYSTEM
SYSTEME SIMULATEUR DE COURSES DE VOITURES INTERACTIF
Patent Applicant/Inventor:
TAGGE James E, 41 Bentrup Court, Lenox, MA 01240, US, US (Residence), US (Nationality)
TAGGE Michael J, 16 Davis Street, Pittsfield, MA 01201, US, US (Residence), US (Nationality)
RINDGE Thomas L, 57A Church Street, Lenox, MA 01240, US, US (Residence), US (Nationality)
HILCHEY Gary, 314 Safford Street, Bennington, VA 05201, US, US (Residence), US (Nationality)

ALCALA Adrian, 139 Alf[redacted] Road, Great Barrington, MA 012[redacted], US, US (Residence), US (Nationality)
AMBROSINO Timothy J, 18 Willow Lane, Pittsfield, MA 01201, US, US (Residence), US (Nationality)
Legal Representative:
GROGAN J Kevin, McCormick, Paulding & Huber LLP, CityPlace II, 185 Asylum Street, Hartford, CT 06103-4102, US
Patent and Priority Information (Country, Number, Date):
Patent: WO 200041156 A1 20000713 (WO 0041156)
Application: WO 98US27861 19981231 (PCT/WO US9827861)
Priority Application: WO 98US27861 19981231
Designated States: CA JP
Main International Patent Class: G09B-009/04
International Patent Class: G09B-009/08
Publication Language: English
Filing Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 9944

English Abstract
An interactive, vehicle simulator system receives input signals indicative of actions of a user who is located in a driver module. The simulator system also displays images and moves the driver module in accordance with the input signals. The simulator system comprises an input device (18) for generating the input signals, an image generator (14), an image presentation apparatus (26), a motion base (24), a motion base controller (22) and a game controller (12).

French Abstract
L'invention concerne un systeme simulateur de vehicule interactif qui recoit des signaux d'entree indiquant des actions prises par un utilisateur se trouvant dans un module de conduite. Le systeme affiche egalement les images et deplace le module de conduite selon les signaux d'entree. Le systeme comprend un dispositif d'entree (18) destine a generer des signaux d'entree, un generateur d'images (14), un appareil de presentation d'images (26), une base de mouvement (24), un controleur de base de mouvement (22) et un controleur de jeu (12).

Fulltext Availability:
Detailed Description
Claims

Detailed Description
... i.e. at least twenty-four but preferably thirty images per second.

In generating the second set of digital images, the image generator projects each **texture map** derived from each source image from **point -of-view** position to the **surfaces** (polygons) of the polygon model. This projecting process provides the visual elements with further realistic detail. In the preferred embodiment, the point-of-view position ...

Claim
... the source image; and generating a texture map from each source image.

18. The method of claim 17, further comprising the step of projecting each **texture map** from a **point -of-view** position onto the **surface** polygons of the visual element.

19. The method of claim 17, further comprising the step of projecting each **texture map** from a plurality of **point -of-view** positions onto the **surface** polygons of the visual element.

12/5,K/11 (Item 2 from file: 349)
DIALOG(R)File 349:PCT Fulltext

00577257

METHOD AND APPARATUS FOR GENERATING A COMPUTER GRAPHICS IMAGE
PROCEDE ET APPAREIL PERMETTANT DE GENERER UNE IMAGE GRAPHIQUE INFORMATISEE

Patent Applicant/Assignee:
PHILIPS ELECTRONICS NV, PHILIPS ELECTRONICS N.V. , Groenewoudseweg 1, NL-5621 BA Eindhoven , NL
PHILIPS NORDEN AB, PHILIPS NORDEN AB , Kottbygatan 7, Kista, S-164 85 Stockholm , SE
Inventor(s):
VAN OVERVELD Cornelis Wilhelmus Antonius Marie, VAN OVERVELD, Cornelis, Wilhelmus, Antonius, Marie , Prof. Holstlaan 6, NL-5656 AA Eindhoven , NL

Patent and Priority Information (Country, Number, Date):
Patent: WO 9822911 A1 19980528
Application: WO 97IB1307 19971020 (PCT/WO IB9701307)
Priority Application: EP 96203265 19961121
Designated States: JP AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE
Main International Patent Class: G06T-015/10;
Publication Language: English
Filing Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 4098

English Abstract
Parallactic changes in the appearance of a surface are simulated using **texture mapping** . When an image is computed, more than one **texture** is **mapped** to the same surface. The coordinate **maps** of those **textures** are shifted relative to each other when the **viewpoint** from which the **surface** is viewed changes. One texture is normally shown on a pixel of the surface, unless indicates a "transparent" state for that pixel, in which case the other texture is shown.

French Abstract
Cette invention consiste a simuler les changements parallactiques dans l'apparence d'une surface en effectuant un mappage de texture. Lorsqu'une image est calculee, on effectue le mappage de plusieurs textures sur la meme surface. Lorsque le point de vue depuis lequel on observe la surface change, les applications des coordonnees de ces textures sont decalees les unes par rapport aux autres. On fait normalement apparaitre une texture sur un pixel de la surface. Dans le cas ou ce pixel se trouve a un etat de "transparence", on fait alors apparaitre l'autre texture.
Fulltext Availability:
Detailed Description
Claims

English Abstract
Parallactic changes in the appearance of a surface are simulated using **texture mapping** . When an image is computed, more than one **texture** is **mapped** to the same surface. The coordinate **maps** of those **textures** are shifted relative to each other when the **viewpoint** from which the **surface** is viewed changes. One texture is normally shown on a pixel of the surface, unless indicates a "transparent" state for that pixel, in which case...

Detailed Description
... a method of generating a two dimensional image of a surface in a higher dimensional model space, the method comprising the steps of selecting a **viewpoint** relative to the **surface** ; determining an area in the image in which the surface is visible as viewed from the viewpoint; **texture mapping** a **texture** on said area, according to a coordinate map.

The invention also relates to a computer graphics device comprising a mapping unit, for mapping a modeled...

...image according to the visual property assigned by the texture to the texture coordinate pair (u,v) to which that pixel coordinate pair (x,y) **maps** .

Texture mapping provides good results for representing optical **texture** such as colouring. **Texture mapping** works less well for representing geometrical texture, such as the texture associated with unevenness of the surface (bumpiness), because the appearance of such a texture depends on the direction from which it is viewed, and not merely on the position of pixels on the surface. This means that **texture mapping** lacks in realism when images of the same **surfaces** from different **viewpoints** have to be computed of **surfaces** that look differently from different angles, for example for simulating movement through the higher dimensional space or for Simulating stereoscopic image pairs.

In order to...image 10 to fill-in the visual effect of the profile and other properties of the surface, such as variations in absorption or reflection.

Ideally, **texture mapping** should account for the change of appearance of the **surface** when the **viewpoint** 33 changes. To illustrate this change of appearance, figure 3 shows a further viewpoint 35 and a further line of view 36 from that viewpoint. It will be seen that from the further **viewpoint** parts of the **Surface** 31 are visible that are invisible from the original viewpoint 33 and vice versa. These parts may have optical properties that differ from those of...will be seen that the angle of incidence of the line of view 34, 36 from the viewpoint 33, 35 to the parts of the **surface** 31 changes when the **viewpoint** 33, 35 changes. This results in a change in the appearance of the **surface** observed from the **viewpoint** 33, 35. The resulting change in appearance is called a lighting change.
Figure 4 shows a ftirther side view of a surface, to illustrate a...

...point 47 on the first auxiliary surface 40 that lies on one line of view 44 with a second point 48 on the second auxiliary **surface** 41 from one **viewpoint** 43, lies on one line of view with a third point 49 on the second auxiliary **Surface** 41 from the other **viewpoint** 45. A pixel coordinate pair (x,y) that is **mapped** to the **texture** coordinate pair (LI,V) of the first point on the first auxiliary surface is therefore mapped either to a second or third texture coordinate pair of points on the second auxiliary **surface** 41, depending on the **viewpoint** 43, 45. When respective textures are associated with the two auxiliary surfaces 40, 41, and the **texture** values to which a pixel **maps** are combined to fill-in the image, e.g. by using either a first texture or a second texture, depending on a transparency state of...

Claim
... A method of generating a two dimensional image of a surface in a higher dimensional model space, the method comprising the steps of selecting a **viewpoint** relative to the **surface** ; determining an area in the image in which the surface is visible as viewed from 5the viewpoint; **texture mapping** a **texture** on said area, according to a coordinate map, characterized, in that the method comprises **texture mapping** at least a further **texture** on said area according to a further coordinate map, a relative offset between the coordinate map and the further coordinate map being adjusted in dependence on the viewpoint; rendering a combination of said **mapped texture** and said further **mapped texture** in said area.

2. A method according to Claim 1, wherein said relative offset is in a direction of a normal projection on said Surface...

...unit, for mapping a modeled surface from a three or higher dimensional space on an area of pixels in a two dimensional image and a **texture** i-nappincl unit for **mapping** a **texture** on the pixels of said area, according to a coordinate **map** , characterized, in that the **texture**

mapping unit is arrang[redacted] for **mapping** at least a furthe[redacted] **texture** on the pixels of said area according to a further coordinate **map** , the **texture mapping** unit adjusting a relative offset between the coordinate map and the further coordinate rnap being in dependence on the **viewpoint** on the **surface** ; the computer graphics device comprising a combining unit for forming a combination of **texture** values **mapped** on the pixel in said are from said **texture map** and said further **texture map** .

5. A computer graphics device according to Claim 4, wherein the **texture mapping** unit adjusts said relative offset in a direction of a normal projection on said surface of a line of sight from the **viewpoint** to the **surface** , the relative offset having a magnitude which is a function of an angle between said line of sight and a normal to the surface.

6...

12/5,K/12 (Item 3 from file: 349)
DIALOG(R)File 349:PCT Fulltext

00546312
TECHNIQUES FOR CREATING AND MODIFYING 3D MODELS AND CORRELATING SUCH MODELS WITH 2D PICTURES
PROCEDE DE CREATION ET DE MODIFICATION DE MODELES TRIDIMENSIONNELS ET DE MISE EN CORRELATION DE TELS MODELES AVEC DES IMAGES BIDIMENSIONNELLES
Patent Applicant/Assignee:
MUNCEY Grant J, MUNCEY, Grant, J., 5073 Shady Avenue, San Jose, CA 95129, US
Inventor(s):
MUNCEY Grant J, MUNCEY, Grant, J., 5073 Shady Avenue, San Jose, CA 95129, US
Patent and Priority Information (Country, Number, Date):
Patent: WO 9746975 A1 19971211
Application: WO 97US9627 19970603 (PCT/WO US9709627)
Priority Application: US 9619400 19960604; US 9747062 19970519; US 97862417 19970523; US 97867013 19970602
Designated States: AU CA JP US AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE
Main International Patent Class: G06T-017/50;
International Patent Class: G06T-017/10; G06T-017/20; G06T-017/40;
Publication Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 23921

English Abstract
A computerimplemented technique allows a user to perform difficult tasks such as extracting and manipulating 3D objects in 2D images of 3D scenes, and placing modeled 3D objects in 2D images of 3D scenes. The system displays a wireframe cage of the desired type of 3D object. The user drags control handles of the cage onto corresponding vertices of the pictured object. The system responds by determining an orientation and position of the modeled object in 3D space, and projecting at least some elements of the modeled object onto a projection plane. Portions of the 2D picture are associated with visible surface portions of the modeled object as projected onto the image plane. As the user manipulates the object, as for example by translating or rotating it, the portions of the picture remain associated with the surface portions of the object in its new position or orientation. The result is that the user can, in effect, select the 2D representation of the object, pull it out of the scene, and manipulate it as a 3D object.
French Abstract
La presente invention concerne un procede mis en oeuvre sur ordinateur et permettant a un utilisateur d'executer des travaux difficiles tels que l'extraction et la manipulation d'objets tridimensionnels dans les images

bidimensionnelles de scenes tridimensionnelles, puis de mettre en places des objets tridimensionnels modelises dans les images bidimensionnelles de scenes tridimensionnelles. Le systeme affiche un trace squelettique correspondant a l'objet tridimensionnel voulu, puis l'utilisateur place le trace squelettique sur les sommets correspondants de l'objet. Le systeme reagit en determinant l'orientation et la position de l'objet modelise dans un volume tridimensionnel, et en projetant au moins quelques elements de l'objet modelise sur un plan de projection. Des parties de l'image bidimensionnelle sont associees aux surfaces partielles visibles de l'objet modelise telles qu'elles se projettent sur un plan d'image. Lorsque l'utilisateur manipule l'objet, par exemple en lui faisant faire une translation ou une rotation, les parties de l'image restent associees avec les surfaces partielles de l'objets dans ses nouvelles position et orientation. Cela permet a l'utilisateur de selectionner effectivement la representation bidimensionnelle, de la sortir de la scene et de la manipuler comme un objet tridimensionnel.

Fulltext Availability:
Detailed Description

Detailed Description
... of the polygon surfaces after operations in manipulation mode).

However, in the preferred specific implementation, the colors on the surfaces are not stored as separate **texture maps** . Rather, the manipulation mode pixel values are determined from the construction mode image and the 3D geometry information obtained as a result of operations in...

...during construction mode), is projected back to the viewpoint. The ray from the point on the object in its original determined position back to the **viewpoint** intersects the image **plane** at a location whose color is the desired color for the pixel to be colored.

The construction-mode image is a grayscale downsampled version of...

12/5,K/13 (Item 4 from file: 349)
DIALOG(R)File 349:PCT Fulltext

00336690
TEXTURED SPHERE AND SPHERICAL ENVIRONMENT MAP RENDERING USING TEXTURE MAP DOUBLE INDIRECTION
RENDU DE SPHERE A SURFACE TEXTUREE ET DE CARTE GEOGRAPHIQUE SPHERIQUE A L'AIDE D'UN ADRESSAGE INDIRECT DOUBLE D'UNE CARTE TEXTUREE
Patent Applicant/Assignee:
APPLE COMPUTER INC
Inventor(s):
MILLER Gavin S P
CHEN Shenchang Eric
Patent and Priority Information (Country, Number, Date):
Patent: WO 9323835 A1 19931125
Application: WO 93US2678 19930323 (PCT/WO US9302678)
Priority Application: US 92880240 19920508
Designated States: AT AU BB BG BR CA CH CZ DE DK ES FI GB HU JP KP KR KZ LK LU MG MN MW NL PL PT RO RU SD SE SK UA VN AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT BJ CF CG CI CM GA GN ML MR NE SN TD TG
Main International Patent Class: G09B-009/08;
International Patent Class: G09B-029/00;
Publication Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 7907

English Abstract
A system for rendering textured spheres and spherical environment maps

provides for real time [redacted]tation of a textured sphere (5[redacted] and panning of the view into a spherical environment map (407), along multiple axes (502) without the need for special rendering hardware. The method is comprised of the steps of: providing a parmetric spherical environment map (501) of the image to be viewed, generating a screen look-up table (404) comprised of look-up addresses, generating a parametric look-up table (408) comprised of index values into the parametric spherical environment map, and for each look-up address (405) in the screen look-up table (404), mapping to an entry in the parametric look-up table (408), retrieving the value in the entry, and using the value to retrieve pixel values (411) from the parametric spherical environment map. Rotation or movement of the view being seen is accomplished by adding offsets to the look-up address and/or the index values.

French Abstract

Un systeme permettant de rendre des spheres texturees et des cartes geographiques spheriques comprend la rotation en temps reel d'une sphere texturee (501) et la visualisation panoramique des images, le long d'axes multiples (502), dans une carte geographique spherique (407), sans qu'il soit necessaire d'utiliser un materiel special pour le rendu. Le procede consiste a: produire une carte geographique parametrique et spherique (501) de l'image a visualiser, generer une table a consulter (404) d'ecran, comprenant des adresses a consulter, generer une table a consulter parametrique (408) comprenant des valeurs d'index dans la carte parametrique, et, pour chaque adresse a consulter (405) dans la table a consulter (404) d'ecran, etablir une correspondance avec une entree dans la table a consulter parametrique (408), recuperer la valeur dans l'entree, et utiliser cette valeur pour recuperer des valeurs de pixel (411) a partir de la carte geographique parametrique. La rotation ou le deplacement du champ visuel en cours d'observation est effectue au moyen de decalages ajoutes a l'adresse a consulter et/ou aux valeurs d'index.

Fulltext Availability:
Detailed Description

Detailed Description
... of freedom for the view point may be updated.
-44 KNOWN]FECHAnlynss jFCOUR RENDERING SPHERICAL ENIVIROTTMEN17 MAMS A related area to such rendering is termed **texture mapping** . In **texture mapping** a **texture** file (or image) is applied to points on an object being rendered. This is conceptually analogous to putting a decal on a solid object. In any event, rendering spherical environment **maps** and **textured** spheres may be done using a number of different known approaches. The most appropriate approach for doing this will depend on the number of degrees...

...session. In any event, when rendering a parametric spherical environment map, one may consider the environment to be a texture on the surface of a **sphere** in 3-D space. A **viewpoint** with respect to the **sphere** will determine what is seen by the viewer. For example, the **viewpoint** ma3y be outside the **sphere** looking at it as a whole, or it may be a perspective view from within the sphere.

Direct Scan-Conversion
For the general perspective case...

14/3,K/1 (Item 1 from file: 349)
DIALOG(R)File 349:PCT Fulltext

00698351
HOW TO DO TANGENT SPACE LIGHTING IN A DEFERRED SHADING ARCHITECTURE
COMMENT ASSURER UN ECLAIRAGE D'ESPACE TANGENTIEL DANS UNE ARCHITECTURE D'OMBRAGE RETARDE
Patent Applicant/Assignee:
RAYCER INC, RAYCER, INC. , 2585 East Bayshore Road, Palo Alto, CA 94303 , US
Inventor(s):
DULUK Jerome F Jr, DULUK, Jerome, F., Jr. , 950 North California Avenue, Palo Alto, CA 94303 , US
DODGEN Steven L, DODGEN, Steven, L. , 15735 Forest Hill Drive, Boulder Creek, CA 95006 , US
PAPAKIPOS Matthew N, PAPAKIPOS, Matthew, N. , 1701 Oak Avenue, Menlo Park, CA 94025 , US
TUCK Nathan D, TUCK, Nathan, D. , 8666 Somerset Avenue, San Diego, CA 92123 , US
BRATT Joseph P, BRATT, Joseph, P. , 1045 Oaktree Drive, San Jose, CA 95129 , US
HESSEL Richard E, HESSEL, Richard, E. , 3225 Flemington Court, Pleasanton, CA 94588 , US
Patent and Priority Information (Country, Number, Date):
Patent: WO 0011614 A2 20000302 (WO 200011614)
Application: WO 99US19036 19990820 (PCT/WO US9919036)
Priority Application: US 9897336 19980820; US 98213990 19981217
Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
Publication Language: English
Filing Language: English
Fulltext Word Count: 58927

Fulltext Availability:
Detailed Description

Detailed Description
... plane of surface V one coordinate of tangent space in plane of surface N surface normal at each vertex of a fragment to be illuminated; **P " surface** tangent along the u axis at each vertex of a fragment to be illuminated; **P " surface** tangent along the v axis at each vertex of a fragment to be illuminated; f,(u,v) partial derivative along the u axis of the input **texture map** computed at each point of the **texture map** (NOTE: according to the OpenGL standard, an input **texture map** is a 1, 2 or 3-climensional array of values f(u,v) that define a height field in (u,v) space. In the SGI...

...in two directions (u and v) for each point of the height field); f,(u,v) partial derivative along the v axis of the input **texture map** computed at each point of the **texture map** (see discussion of f,(u,v)); L light vector in eye space; H half

14/3,K/2 (Item 2 from file: 349)
DIALOG(R)File 349:PCT Fulltext

00671212
MICROSCOPE GENERATING A THREE-DIMENSIONAL REPRESENTATION OF AN OBJECT AND IMAGES GENERATED BY SUCH A MICROSCOPE
MICROSCOPE GENERANT UNE REPRESENTATION TRIDIMENSIONNELLE D'UN OBJET ET IMAGES GENEREES PAR CE MICROSCOPE
Patent Applicant/Assignee:

LAUER Vincent, LAUER, V[redacted]cent , 1, villa de Beaute, F-94[redacted]0 Nogent sur Marne , FR

Inventor(s):

LAUER Vincent, LAUER, Vincent , 1, villa de Beaute, F-94130 Nogent sur Marne , FR

Patent and Priority Information (Country, Number, Date):

Patent: WO 9953355 A1 19991021

Application: WO 99FR854 19990413 (PCT/WO FR9900854)

Priority Application: FR 984654 19980415; FR 9810136 19980806; FR 9942 19990106; FR 994536 19990412

Designated States: BR JP US AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Publication Language: French

Filing Language: French

Fulltext Word Count: 113063

Fulltext Availability:

Claims

Claim

... A cette fin, le systeme peut acquerir periodiquement une image de reference. L'image de reference consiste par exemple en une image obtenue sur la **surface** de reception pour une onde d'eclairage fixe, qui n' ... le cas ou deux objectifs sont utilises, le pas d'echantillonnage et les axes sur l'image plane en frequence generee a partir d'une **surface** de reception associee a l'objectif en vis a-vis ne correspondent pas au pas d'echantillonnage et aux axes de la representation tridimensionnelle de ...de (201).

L'onde issue de l'objet (112) traverse l'objectif de microscope (113). Cet objectif est un objectif plan (qui donne une image **plane** d'un plan), a grande ouverture (par exemple 1,25), a **immersion** , et formant une **image** aggrandie de l'objet a une distance finie.

Dans le plan ou l'objectif forme normalement l'image de l'objet a observer, on interpose...

```
File   2:INSPEC 1969-200[redacted]ep W4
         (c) 2000 Institution of Electrical Engineers
File   8:Ei Compendex(R) 1970-2000/Aug W4
         (c) 2000 Engineering Info. Inc.
File   6:NTIS 1964-2000/Oct W3
         Comp&distr  2000 NTIS, Intl Cpyrght All Right
File  99:Wilson Appl. Sci & Tech Abs 1983-2000/Aug
         (c) 2000 The HW Wilson Co.
File 144:Pascal 1973-2000/Sep W3
         (c) 2000 INIST/CNRS
File  77:Conference Papers Index 1973-2000/Jul
         (c) 2000 Cambridge Sci Abs
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
         (c) 1998 Inst for Sci Info
File  34:SciSearch(R) Cited Ref Sci 1990-2000/Sep W3
         (c) 2000 Inst for Sci Info
File 108:Aerospace Database 1962-2000/Sep
         (c) 2000 AIAA
File 233:Internet & Personal Comp. Abs. 1981-2000/Sep
         (c) 2000 Info. Today Inc.
File 238:Abs. in New Tech & Eng. 1981-2000/Sep
         (c) 2000 Reed-Elsevier (UK) Ltd.
File  65:Inside Conferences 1993-2000/Sep W4
         (c) 2000 BLDSC all rts. reserv.
File  94:JICST-EPlus 1985-2000/May W3
         (c)2000 Japan Science and Tech Corp(JST)
File  14:Mechanical Engineering Abs 1973-2000/Sep
         (c) 2000 Cambridge Sci Abs
File  35:Dissertation Abstracts Online 1861-2000/Jul
         (c) 2000 UMI
File 248:PIRA 1975-2000Oct W4
         (c) 2000 Pira International

Set     Items   Description
S1        887   P()(SURFACE? OR SPHERE? OR PLANE? ?) OR PSURFACE? OR PSPHE-
                RE?
S2     245012   VIEWPOINT? OR VIEW(1N)POINT? ? OR DIRECTION(1W)VIEW? ?
S3       5937   (TEXTURE? OR TEXEL?)(5N)(MAP? ? OR MAPP? OR APPLICATION? OR
                APPLY?)
S4       1397   ((FULL? ? OR COMPLETE? OR TOTAL? OR ENTIRE?)(2N)SURROUND? -
                OR WRAP?()AROUND OR IMMERS????)(5N)(SCENE? ? OR IMAGE? OR DATA
                OR PICTURE? ? OR GRAPHIC? ?)
S5        187   SAMPL?(5N)(VISIBLE OR VIRTUAL OR DIGITAL)(3N)(WORLD? OR SP-
                ACE OR ENVIRON?)
S6          0   S1 AND S2 AND S3 AND (S4 OR S5)
S7          0   S2 AND S3 AND (S4 OR S5)
S8          0   S1 AND S3 AND (S4 OR S5)
S9          0   S1 AND S2 AND (S3 OR S4 OR S5)
S10         0   S1 AND (S3 OR S4 OR S5)
S11       219   S2 AND (S3 OR S4 OR S5)
S12        14   (S1 OR SURFACE? OR SHPERE? OR PLANE OR PLANES)(5N)S2 AND (-
                S3 OR S4 OR S5)
S13        10   RD (unique items)
S14         1   AU=(OXAAL, F? OR OXAAL F?)
S15        81   (S1 OR SURFACE? OR SPHERE? OR PLANE OR PLANES) AND S11
S16      7527   (FULL? ? OR COMPLETE? OR TOTAL? OR ENTIRE?)(2N)SURROUND? OR
                WRAP?()AROUND OR IMMERS?????(5N)(SCENE? ? OR IMAGE? ? OR DATA
                OR PICTURE? OR GRAPHIC? ?)
S17   4543929   S1 OR SURFACE? OR PLANE OR PLANES OR SPHERE?
S18         0   S17 AND S2 AND S3 AND S16
S19         3   S17 AND S3 AND S16
S20         2   RD (unique items)
S21         2   S20 NOT S13
S22         0   S2 AND S16 AND S3
?
```

13/5/1 (Item 1 from file: 2)
DIALOG(R)File 2:INSPEC

6526612 INSPEC Abstract Number: C2000-04-6130B-062
Title: An efficient image mapping **method for 3D surface** textures
Author(s): Matsushita, K.; Kaneko, T.
Author Affiliation: Dept. of Inf. & Comput. Sci., Toyohashi Univ. of Technol., Japan
Journal: Transactions of the Institute of Electronics, Information and Communication Engineers D-II vol.J83D-II, no.2 p.525-34
Publisher: Inst. Electron. Inf. & Commun. Eng,
Publication Date: Feb. 2000 Country of Publication: Japan
CODEN: DTGDE7 ISSN: 0915-1923
SICI: 0915-1923(200002)J83DII:2L.525:EIMM;1-K
Material Identity Number: M973-2000-002
Language: Japanese Document Type: Journal Paper (JP)
Treatment: Practical (P)
Abstract: 3D computer graphics has been widely used lately, but it is a laborious task to obtain surface data and texture data of a 3D object. There are expensive scanners that extract such data for existing objects. We are concerned with the problem of acquiring texture data for an object whose surface data is already available with a low cost scanner or CT. With the given surface data, we identify a minimal number of **viewpoints** which can cover all the **surfaces** . Then we take photographs from the identified viewpoints manually. Deviations from the specified locations are corrected automatically by matching the external edges or silhouette of the object with those computed from the 3D surfaces. The proposed method was tested for CT data of three plastic toys, and good results were obtained. (17 Refs)
Descriptors: computer graphics; computerised tomography; image matching; image scanners; image texture
Identifiers: image mapping method; 3D surface textures; 3D computer graphics; 3D object; image scanners; photographs; CT data; three dimensional computer graphics; computerised tomography
Class Codes: C6130B (Graphics techniques); C5260B (Computer vision and image processing techniques)

13/5/2 (Item 2 from file: 2)
DIALOG(R)File 2:INSPEC

6061868 INSPEC Abstract Number: B9812-6140C-116, C9812-5260B-067
Title: Multi-viewpoint stereo from uncalibrated video sequences
Author(s): Koch, R.; Pollefeys, M.; Van Gool, L.
Author Affiliation: Katholieke Univ., Leuven, Belgium
Conference Title: Computer Vision - ECCV'98. 5th European Conference on Computer Vision. Proceedings Part vol.1 p.55-71 vol.1
Editor(s): Burkhardt, H.; Neumann, B.
Publisher: Springer-Verlag, Berlin, Germany
Publication Date: 1998 Country of Publication: Germany 2 vol. (xvi+927+881) pp.
ISBN: 3 540 64569 1 Material Identity Number: XX98-01494
Conference Title: Computer Vision - ECCV'98 5th European Conference on Computer Vision
Conference Date: 2-6 June 1998 Conference Location: Freiburg, Germany
Language: English Document Type: Conference Paper (PA)
Treatment: Theoretical (T); Experimental (X)
Abstract: This contribution describes an automatic 3D surface modeling system that extracts dense metric 3D surfaces from an uncalibrated video sequence. A static 3D scene is observed from multiple viewpoints by freely moving a video camera around the object. No restrictions on camera movement and internal camera parameters like zoom are imposed, as the camera pose and intrinsic parameters are calibrated from the sequence. Dense surface reconstructions are obtained by first treating consecutive images of the

sequence as stereoscopic pairs and computing dense disparity maps for all image pairs. All viewpoints are then linked by controlled correspondence linking for each image pixel. The correspondence linking algorithm allows for accurate depth estimation as well as image texture fusion from all **viewpoints** simultaneously. By keeping track of **surface** visibility and measurement uncertainty it can cope with occlusions and measurement outliers. The correspondence linking is applied to increase the robustness and geometrical resolution of surface depth as well as to remove highlights and specular reflections, and to create super-resolution **texture maps** for increased realism. The major impact of this work is the ability to automatically generate geometrically correct and visually pleasing 3D surface models from image sequences alone, which allows economic model generation for a wide range of **applications** . The resulting **textured** 3D surface models are highly realistic VRML representations of the scene. (26 Refs)

Descriptors: computational geometry; computer vision; feature extraction; image reconstruction; image representation; image resolution; image sequences; image texture; realistic images; stereo image processing; virtual reality

Identifiers: multi-viewpoint stereo; uncalibrated video sequences; 3D surface modeling; 3D surface extraction; video camera; camera pose; dense surface reconstructions; image sequence; stereoscopic pairs; dense disparity maps; correspondence linking; depth estimation; image texture fusion; surface visibility; measurement uncertainty; occlusions; outliers; robustness; geometrical resolution; super-resolution **texture maps** ; VRML representations

Class Codes: B6140C (Optical information, image and video signal processing); C5260B (Computer vision and image processing techniques); C1250 (Pattern recognition); C4260 (Computational geometry); C6130B (Graphics techniques)

13/5/3 (Item 3 from file: 2)

DIALOG(R)File 2:INSPEC

5032548 INSPEC Abstract Number: B9510-6140C-359, C9510-1250-191

Title: 3-D surface reconstruction from stereoscopic image sequences

Author(s): Koch, R.

Author Affiliation: Inst. fur Theor. Nachrichtentech. und Inf., Hannover Univ., Germany

Conference Title: Proceedings. Fifth International Conference on Computer Vision (Cat. No.95CB35744) p.109-14

Publisher: IEEE Comput. Soc. Press, Los Alamitos, CA, USA

Publication Date: 1995 Country of Publication: USA xix+1117 pp.

ISBN: 0 8186 7042 8

U.S. Copyright Clearance Center Code: 0 8186 7042 8/95/$4.00

Conference Title: Proceedings of IEEE International Conference on Computer Vision

Conference Sponsor: IEEE Comput. Soc. Tech. Committee on Pattern Anal. & Machine Intelligence

Conference Date: 20-23 June 1995 Conference Location: Cambridge, MA, USA

Language: English Document Type: Conference Paper (PA)

Treatment: Applications (A); Practical (P)

Abstract: A stereoscopic scene analysis system for 3-D modeling of objects from stereoscopic image sequences is described. A dense map of 3-D surface points is obtained by image correspondence, object segmentation, interpolation, and triangulation. Emphasis is put on the accurate measurement of image correspondences from grey level images. The surface geometry of each scene object is approximated by a triangular wire-frame which stores the surface **texture** in **texture maps** . Sequence processing serves to track camera motion and to fuse **surfaces** from different **view points** into a consistent 3-D **surface** model. From the textured 3-D models, highly realistic image sequences from arbitrary view points can be synthesized using computer graphics techniques. (26 Refs)

Descriptors: computer graphics; image sequences; interpolation; stereo

image processing; surface reconstruction
Identifiers: 3-D surface reconstruction; stereoscopic image sequences; stereoscopic scene analysis system; 3-D modeling; dense map; 3-D surface points; image correspondence; object segmentation; interpolation; triangulation; grey level images; triangular wire-frame; surface texture; **texture maps** ; sequence processing; camera motion; 3-D surface model; computer graphics
Class Codes: B6140C (Optical information, image and video signal processing); B0290F (Interpolation and function approximation); C1250 (Pattern recognition); C5260B (Computer vision and image processing techniques); C4130 (Interpolation and function approximation); C6130B (Graphics techniques)

13/5/4 (Item 4 from file: 2)
DIALOG(R)File 2:INSPEC

4648173 INSPEC Abstract Number: C9405-5260B-224
Title: Adaptive sampling and reconstruction for discontinuity preserving texture- mapped **triangulation**
Author(s): Tanaka, H.T.; Kishino, F.
Author Affiliation: ATR Commun. Syst. Res. Labs., Kyoto, Japan
p.298-303
Publisher: IEEE Comput. Soc. Press, Los Alamitos, CA, USA
Publication Date: 1994 Country of Publication: USA ix+307 pp.
ISBN: 0 8186 5310 8
U.S. Copyright Clearance Center Code: 0 8186 5310 8/94/$03.00
Conference Title: Proceedings of 1994 IEEE 2nd CAD-Based Vision Workshop
Conference Sponsor: IEEE
Conference Date: 8-11 Feb. 1994 Conference Location: Champion, PA, USA
Language: English Document Type: Conference Paper (PA)
Treatment: Practical (P); Theoretical (T)
Abstract: The objective of this work is to use input data to construct a **texture -mapped** polyhedral representation of surfaces that can adapt to intrinsic surface properties, preserving their discontinuities, and might be used efficiently as an accurate 3D object model in graphical rendering. The authors present an adaptive sampling and reconstruction model for hierarchical triangulation of 3D objects. They have developed a parallel algorithm of adaptive mesh generation that recursively bisects mesh elements by increasing the number of mesh nodes according to local surface properties, such as surface orientation, curvature and color. The recursive subdivision based on such a **viewpoint** -invariant feature yields the hierarchical **surface** triangulation that is intrinsic to the surface, and satisfies the absolute accuracy criterion, because nodes are generated as many times as required until the entire surface has been approximated with a given threshold. The authors apply the algorithm to the adaptive sampling and reconstruction of range and color-texture images of human faces and fine antique dolls. (0 Refs)
Descriptors: image reconstruction; mesh generation; rendering (computer graphics)
Identifiers: adaptive sampling; reconstruction; discontinuity preserving; **texture -mapped** triangulation; graphical rendering; hierarchical triangulation; adaptive mesh; parallel algorithm; adaptive mesh generation; recursive subdivision; human faces; antique dolls
Class Codes: C5260B (Computer vision and picture processing); C4185 (Finite element analysis); C6130B (Graphics techniques)

13/5/5 (Item 5 from file: 2)
DIALOG(R)File 2:INSPEC

4514553 INSPEC Abstract Number: C9312-5260B-085
Title: Automatic reconstruction of buildings from stereoscopic image sequences
Author(s): Koch, R.

Author Affiliation: Inst. fur Theor. Nachrichtentech. und Informationsverarbeitung, Hannover Univ., Germany
Journal: Computer Graphics Forum vol.12, no.3 p.C339-50
Publication Date: 1993 Country of Publication: UK
CODEN: CGFODY ISSN: 0167-7055
Conference Title: European Association for Computer Graphics 14th Annual Conference and Exhibition. EUROGRAPHICS '93
Conference Date: 6-10 Sept. 1993 Conference Location: Barcelona, Spain
Language: English Document Type: Conference Paper (PA); Journal Paper (JP)
Treatment: Practical (P)
Abstract: A vision-based 3-D scene analysis system is described that is capable to model complex real-world scenes like streets and buildings automatically from stereoscopic image pairs. Input to the system is a sequence of stereoscopic images taken with two standard CCD cameras and TV lenses. The relative orientation of both cameras to each other is known by calibration. The camera pair is then moved throughout the scene and a long sequence of closely spaced views is recorded. Each of the stereoscopic image pairs is rectified and a dense map of 3-D surface points is obtained by area correlation, object segmentation, interpolation, and triangulation. 3-D camera motion relative to the scheme coordinate system is tracked directly from the image sequence which allows to fuse 3-D **surface** measurements form different **viewpoints** into a consistent 3-D model scene. The surface geometry of each scene object is approximated by a triangular surface mesh which stores the surface **texture** in a **texture map** . From the **textured** 3-D models, realistic looking image sequences from arbitrary view points can be synthesized using computer graphics. (24 Refs)
Descriptors: computer graphics; computer vision; image reconstruction; image sequences; stereo image processing
Identifiers: 3D scene analysis; virtual reality; stereoscopic image sequences; real-world scenes; streets; buildings; stereoscopic image pairs; CCD cameras; TV lenses; surface points; area correlation; object segmentation; interpolation; triangulation; camera motion; image sequence; surface geometry; triangular surface mesh; computer graphics
Class Codes: C5260B (Computer vision and picture processing); C6130B (Graphics techniques)

13/5/6 (Item 6 from file: 2)
DIALOG(R)File 2:INSPEC

03875904 INSPEC Abstract Number: A91056655, B91035362, C91031211
Title: A user interface for 3D reconstruction of computer tomograms or magnetic resonance images
Author(s): Fruhauf, M.
Author Affiliation: Fraunhofer-Arbeitsgruppe Graphische Datenverarbeitung , Darmstadt, West Germany
Conference Title: Scientific Computing and Automation (Europe) 1990. Proceedings of the Scientific Computing and Automation (Europe) Conference p.31-7
Editor(s): Karjalainen, E.J.
Publisher: Elsevier, Amsterdam, Netherlands
Publication Date: 1990 Country of Publication: Netherlands xii+498 pp.
ISBN: 0 444 88949 3
Conference Date: 12-15 June 1990 Conference Location: Maastricht, Netherlands
Language: English Document Type: Conference Paper (PA)
Treatment: Practical (P)
Abstract: Three-dimensional reconstruction of medical image data is accomplished by especially developed volume rendering techniques. To make these techniques available for the daily use in hospitals for diagnosis, a special user interface is required. The most challenging part of the user interface is the real-time interactive definition of viewing parameters for volume rendering. Viewing parameters in this case are the **viewpoint** and cut **planes** through the volume data set. The author uses an approach for

the fast rendering of volume data which is based on a scanline-based **texture mapping** on a cube's surface. Furthermore, the author has developed tools for interactive colour assignment, lighting, segmentation and contour extraction which are included in the user interface. The user interface solves the problem of real-time rotation and slicing of 16 megabyte CT data sets on graphics workstations. It follows the natural understanding of rotation and is operated by using the workstation's mouse. (12 Refs)

Descriptors: biomedical NMR; computer graphics; computerised picture processing; computerised tomography; medical diagnostic computing; real-time systems; user interfaces

Identifiers: data set slicing; cube surface; user interface; 3D reconstruction; computer tomograms; magnetic resonance images; medical image data; volume rendering techniques; hospitals; diagnosis; real-time interactive definition; viewing parameters; viewpoint; cut planes; scanline-based **texture mapping** ; interactive colour assignment; lighting ; segmentation; contour extraction; rotation; graphics workstations; mouse

Class Codes: A8770E (Diagnostic methods and instrumentation); A8760G (Laser beams, microwaves, and other electromagnetic waves); A8760J (Corpuscular radiation and radioisotopes); B7510B (Radiation and radioactivity applications); B6140C (Optical information processing); C7330 (Biology and medicine); C5260B (Computer vision and picture processing); C6180 (User interfaces); C6130B (Graphics techniques)

13/5/7 (Item 1 from file: 8)

04367179 E.I. No: EIP95122937479

Title: Active 3D modeling by recursive viewpoint selection based on symmetry

Author: Yoshida, Kazunori; Tanaka, Hiromi T.; Ohya, Jun; Kishino, Fumio

Corporate Source: ATR Communication Systems Research Labs., Soraku-gun, Kyoto, Jpn

Conference Title: Intelligent Robots and Computer Vision XIV: Algorithms, Techniques, Active Vision, and Materials Handling

Conference Location: Philadelphia, PA, USA Conference Date: 19951023-19951026

Sponsor: SPIE - Int Soc for Opt Engineering, Bellingham, WA USA

E.I. Conference No.: 22417

Source: Proceedings of SPIE - The International Society for Optical Engineering v 2588 1995. Society of Photo-Optical Instrumentation Engineers, Bellingham, WA, USA. p 326-336

Publication Year: 1995

CODEN: PSISDG ISSN: 0277-786X ISBN: 0-8194-1952-4

Language: English

Document Type: CA; (Conference Article) Treatment: T; (Theoretical)

Journal Announcement: 9605W3

Abstract: This paper proposes a new method for creating 3D models of objects efficiently from the silhouettes of objects in images acquired by an active camera whose viewpoints are selected recursively based on symmetry planes of the observed silhouettes. In the proposed method, to obtain the initial view point, we use the assumption that an object takes a stable pose under the influence of gravity by having a symmetry plane to which the direction of gravity is constrained. We choose a point in the direction of the gravity as the initial viewpoint. Then, the new view points are determined based on information about the symmetry plane, where the symmetry plane is obtained from the center of gravity and the axis of inertia of the observed silhouette. This process is repeated until no new view point is selected. Then, the 3D shape of the object is reconstructed by processing voxel data based on the silhouette information acquired at the selected view points. Finally, **textures** acquired by the observations are **mapped** to the reconstructed 3D shape. We present some experimental results that show the effectiveness of the proposed method. 3 Refs.

Descriptors: *Mathematical models; Computer vision; Robotics; Three dimensional; Image reconstruction; Mathematical techniques

Identifiers: Recursive **viewpoint** selection; Silhouettes; Symmetry

plane ; 3D shapes
Classification Codes:
741.2 (Vision); 731.6 (Robot Applications); 723.2 (Data Processing)
921 (Applied Mathematics); 741 (Optics & Optical Devices); 731 (Automatic Control Principles); 723 (Computer Software)
92 (ENGINEERING MATHEMATICS); 74 (OPTICAL TECHNOLOGY); 73 (CONTROL ENGINEERING); 72 (COMPUTERS & DATA PROCESSING)

13/5/8 (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

08901493 Genuine Article#: 343EH Number of References: 18
Title: Real-time rendering algorithm based on a hybrid rendering scheme
Author(s): Zheng WT (REPRINT) ; Bao HJ; Peng QS; Sun HQ
Corporate Source: ZHEJIANG UNIV,STATE KEY LAB CAD&CG/HANGZHOU 310027//PEOPLES R CHINA/ (REPRINT); CHINESE UNIV HONG KONG,/HONG KONG/HONG KONG/PEOPLES R CHINA/
Journal: PROGRESS IN NATURAL SCIENCE, 2000, V10, N2 (FEB), P141-146
ISSN: 1002-0071 Publication date: 20000200
Publisher: TAYLOR & FRANCIS LTD, 11 NEW FETTER LANE, LONDON EC4P 4EE, ENGLAND
Language: English Document Type: ARTICLE
Geographic Location: PEOPLES R CHINA
Subfile: CC PHYS--Current Contents, Physical, Chemical & Earth Sciences
Journal Subject Category: MULTIDISCIPLINARY SCIENCES
Abstract: A real-time rendering algorithm based on a hybrid rendering scheme is presented. The key frames of the virtual scene are generated with a geometry-based approach, then a non-linear transformation to all visible points of each frame near the current viewpoint is performed to reveal their coplanar characteristics and a hierarchical polygon approximation of the local scene is set up. Any intermediate image between the two key frames could be obtained by re-projecting these polygons onto the view **plane** related to the current **viewpoint** . The gaps that might appear on the intermediate image are filled through bi-directional backward image warping. Experimental results show that our approach is insensitive to the complexity of the scene and has a satisfactory performance.
Descriptors--Author Keywords: virtual reality ; image-based rendering ; level of detail ; **texture mapping**
Cited References:
CHEN SE, 1993, V27, P279, COMPUTER GRAPHICS
CHEN SE, 1995, V29, P29, COMPUTER GRAPHICS
DARSA L, 1998, V22, P55, COMPUT GRAPH
DARSA L, 1997, P25, P 1997 S INT 3D GRAP
GORTLER SJ, 1996, V30, P43, COMPUTER GRAPHICS
GREENE N, 1993, V27, P231, ACM COMPUTER GRAPHIC
HOPPE H, 1996, V30, P99, COMPUTER GRAPHICS
LEVOY M, 1996, V30, P31, COMPUTER GRAPHICS
LUEBKE D, 1997, V31, P199, COMPUTER GRAPHICS
MARK WR, 1997, P7, P 1997 S INT 3D GRAP
MCMILLAN L, 1995, V29, P39, COMPUTER GRAPHICS
REGAN M, 1994, V28, P155, COMPUTER GRAPHICS
SHADE J, 1996, V30, P75, COMPUTER GRAPHICS
SILLION FX, 1997, V16, P207, COMPUT GRAPH FORUM
TELLER S, 1991, V25, P61, COMPUTER GRAPHICS
TORBORG J, 1996, V30, P353, COMPUT GRAPH FORUM
WANG Y, 1998, V17, P187, NONLINEAR DYNAM
ZHANG HS, 1997, V31, P77, COMPUTER GRAPHICS

13/5/9 (Item 2 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

03571788 Genuine Article#: PN594 Number of References: 0
(NO REFS KEYED)

Title: MODEL-BASED 3-D S[redacted]E ANALYSIS FROM STEREOSCOPIC IM[redacted]GE SEQUENCES
Author(s): KOCH R
Corporate Source: UNIV HANNOVER,INST THEORET NACHRICHTENTECH & INFORMAT ERARBEITUNG,APPELSTR 9A/D-30167 HANNOVER//GERMANY/
Journal: ISPRS JOURNAL OF PHOTOGRAMMETRY AND REMOTE SENSING, 1994, V49, N5 (OCT), P23-30
ISSN: 0924-2716
Language: ENGLISH Document Type: ARTICLE
Geographic Location: GERMANY
Subfile: SciSearch; CC ENGI--Current Contents, Engineering, Technology & Applied Sciences
Journal Subject Category: GEOGRAPHY; GEOLOGY; PHOTOGRAPHIC TECHNOLOGY; REMOTE SENSING
Abstract: A vision-based 3-D scene analysis system is described that is capable to model complex real-world scenes like buildings automatically from stereoscopic image pairs. Input to the system is a sequence of stereoscopic images taken with two standard CCD Cameras and TV lenses. The relative orientation of both cameras to each other is known by calibration. The camera pair is then moved throughout the scene and a long sequence of closely spaced views is recorded. Each of the stereoscopic image pairs is rectified and a dense map of 3-D surface points is obtained by area correlation, object segmentation, interpolation, and triangulation. 3-D camera motion relative to the scene coordinate system is tracked directly from the image sequence which allows to fuse 3-D **surface** measurements from different **view points** into a consistent 3-D model scene. The surface geometry of each scene object is approximated by a triangular surface mesh which stores the surface **texture** in a **texture map** . From the **textured** 3-D models, realistic looking image sequences from arbitrary view points can be synthesized using computer graphics.

13/5/10 (Item 1 from file: 94)
DIALOG(R)File 94:JICST-EPlus

04474450 JICST ACCESSION NUMBER: 99A0912122 FILE SEGMENT: JICST-E
Features of HVAF (high-velocity flame) coating and film characteristics.
AKIMOTO KOICHI (1)
(1) Kokenvtekuno
Konbatekku(Converting Technology), 1999, VOL.27,NO.9, PAGE.5-8, FIG.8, TBL.1, REF.6
JOURNAL NUMBER: Y0873ABB ISSN NO: 0911-2316
UNIVERSAL DECIMAL CLASSIFICATION: 666.293 621.793.7
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Commentary
MEDIA TYPE: Printed Publication
ABSTRACT: This paper explains the titled HVAF flame spraying technology using WC cermet to modify metal material **surface** from the following **viewpoints** : 1) Principle; coating film formation on substrates set in high velocity jet flame generated by combustion of kerosene and compressed air using ultra high verocity collision energy, 2) merits; lower oxygen concentration in flame than HVOF methods, thus providing little decarburization and 3) characteristics of coating films (**texture** , wear resistance, impact resistance), **applications** and cost.
DESCRIPTORS: flame spraying; surface modification; cermet; tungsten carbide ; fast collision; collision energy; decarburizing; abrasion resistance; impact strength
BROADER DESCRIPTORS: thermal spraying; surface treatment; treatment; reforming; ceramics; carbide; carbon compound; carbon group element compound; tungsten compound; 6A group element compound; transition metal compound; collision; energy; removal; mechanical property; property; resistance(endure); strength
CLASSIFICATION CODE(S): YC02050V; WC08030N

14/5/1 (Item 1 from file: 65)
DIALOG(R)File 65:Inside Conferences

01090916 INSIDE CONFERENCE ITEM ID: CN010683816
Improvements to GraphPack: A System to Manipulate Graphs and Digraphs
Krishnamoorthy, M.; Suess, A.; Onghena, M.; **Oxaal, F.**
CONFERENCE: Computational support for discrete mathematics-DIMACS workshop
DIMACS SERIES IN DISCRETE MATHEMATICS AND THEORETICAL COMPUTER SCIENCE, 1994; VOL 15 P: 279-296
Providence, RI, American Mathematical Society, 1994
ISBN: 0821866052
LANGUAGE: English DOCUMENT TYPE: Conference Papers
CONFERENCE EDITOR(S): Dean, N.; Shannon, G. E.
CONFERENCE SPONSOR: NSF Science and Technology Center in Discrete Mathematics and Theoretical Computer Science
CONFERENCE LOCATION: Piscataway, NJ
CONFERENCE DATE: Mar 1992 (199203) (199203)

BRITISH LIBRARY ITEM LOCATION: 3588.461700
DESCRIPTORS: discrete mathematics; computational support; DIMACS; theoretical computer science

21/5/1 (Item 1 from file: 2)
DIALOG(R)File 2:INSPEC

5586445 INSPEC Abstract Number: C9707-7330-020
Title: Generating high resolution data using hints
Author(s): Brody, B.; Boyd, E.; Olmsted, C.
Author Affiliation: Alaska Univ., Fairbanks, AK, USA
Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA) vol.3017 p.182-92
Publisher: SPIE-Int. Soc. Opt. Eng,
Publication Date: 1997 Country of Publication: USA
CODEN: PSISDG ISSN: 0277-786X
SICI: 0277-786X(1997)3017L.182:GHRD;1-Q
Material Identity Number: C574-97094
U.S. Copyright Clearance Center Code: 0 8194 2428 5/97/$10.00
Conference Title: Visual Data Exploration and Analysis IV
Conference Sponsor: SPIE; Soc. Imaging Sci..& Technol
Conference Date: 12-13 Feb. 1997 Conference Location: San Jose, CA, USA
Language: English Document Type: Conference Paper (PA); Journal Paper (JP)
Treatment: Practical (P)
Abstract: We describe an artistic project that uses scientific tools to convey a sense of place. Detail is an important element in creating an artistic sense of place. This detail must be consistent with what we know about the correlation between topography and its **surface** appearance. The vegetation and exposed rock in the mountains of the North Slope of the Brooks Range (Arctic National Wildlife Refuge) are distinctly correlated with the digital terrain. Analysis of elevation, slope, and aspect generates tools used to create a probability mapping between the terrain and the appearance of the **surface** . Digital painting techniques create **texture maps** that we **wrap around** three dimensional models of the terrain. We use these models in our animation of a traverse of the landscape. These techniques aid in the development of high resolution geometry. A persistent theme in this process is the use of visual metaphor and visual thinking. Active geomorphology and the viscous flow of vegetation characterize the northeastern mountains of the Brooks Range. The vegetation exists, not so much in competition, but in response to solar energy niches. Colony ecology is significant. The **surface** creeps in response to the flow of water and ice. The ecology and topography appear unmodified by human hands. One gets the impression that the forces of nature are consistently and clearly expressed. Our art uses science to create a representation of this dynamic landscape. (4 Refs)
Descriptors: art; biology computing; cartography; ecology; geomorphology; image texture; probability
Identifiers: high resolution data generation; hints; artistic project; scientific tools; topography; **surface** appearance; exposed rock; mountains ; Brooks Range; Arctic National Wildlife Refuge; digital terrain; probability mapping; digital painting techniques; **texture maps** ; three dimensional models; animation; high resolution geometry; visual metaphor; active geomorphology; viscous flow; solar energy niches; colony ecology
Class Codes: C7330 (Biology and medical computing); C7840 (Geography and cartography computing); C6130B (Graphics techniques); C5260B (Computer vision and image processing techniques); C1140Z (Other topics in statistics); C7820 (Humanities computing)

21/5/2 (Item 2 from file: 2)
DIALOG(R)File 2:INSPEC

5032396 INSPEC Abstract Number: C9510-6130B-026
Title: Texture, displacement and immersion: a model for tree rendering
Author(s): Chover, M.; Vivo, R.; Quiros, R.; Lluch, X.

Author Affiliation: De[redacted] de Inf., Univ. Jaume I, Castel[redacted]on, Spain
Conference Title: WSCG 95 (Winter School of Computer Graphics and Visualisation 95). Third International Conference in Central Europe on Computer Graphics and Visualisation 95 Part vol.1 p.69-78 vol.1
Editor(s): Skala, V.
Publisher: Univ. West Bohemia, Plzen, Czech Republic
Publication Date: 1995 Country of Publication: Czech Republic 2 vol. 485 pp.
Conference Title: Proceedings of Third International Conference in Central Europe on Computer Graphics and Visualisation: Winter School of Computer Graphics
Conference Sponsor: Autodesk; DTP Studio; Inel; Silicon Graphics; CAdis; Hewlett Packard; Intergraph CR; et al
Conference Date: 14-18 Feb. 1995 Conference Location: Plzen, Czech Republic
Availability: Union Agency, Na Mazinach 9, 322 00 Plzen, Czech Republic
Language: English Document Type: Conference Paper (PA)
Treatment: Practical (P)
Abstract: This paper presents a new method to generate realistic details on tree **surfaces** and structures. The method combines texture, displacement and immersion techniques. We use an extension of L-Systems, namely random L-Systems, to construct the tree, and represent its structure of branches using parametric **surfaces** (cones). Adding displacement at the **surface** level by means of 2D and 3D functions, and deviation at the structure level by immersion in a 3D function, we perturb the **surface** definition. The parametric definition of the **surface** is adequate to **apply** **textures** and reduces the spatial cost of the previous tree representations. In addition, the proposed technique can even manage further detail than previous ones. (20 Refs)
Descriptors: biology computing; image texture; realistic images; rendering (computer graphics)
Identifiers: image texture; image displacement; **image** **immersion** ; tree rendering; realistic details; L-Systems; random L-Systems; branches; parametric **surfaces** ; cones; 3D functions; 2D functions; **surface** definition; spatial cost
Class Codes: C6130B (Graphics techniques)